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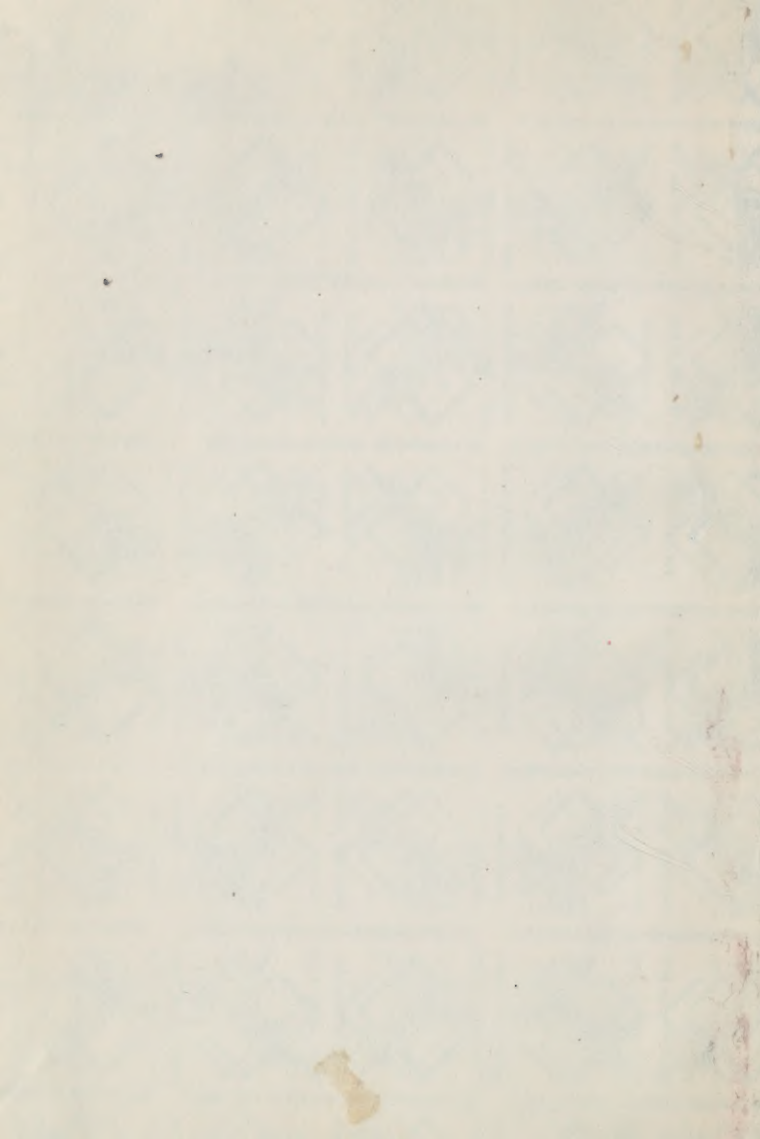
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# DIPLATERATOLOGY;

OR A HISTORY OF SOME OF THE MOST WONDER-  
FUL HUMAN BEINGS THAT HAVE EVER  
LIVED IN DOUBLE FORM, AND

## A SCRUTINIZING VIEW

INTO THE MARVELOUSLY STRANGE FREAKS  
OF NATURE, AND CAUSES OF SAME.

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By H. BESSE, M. D.

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MINNIE AND MINA FINLEY.



## INTRODUCTORY REMARKS.

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Y object in writing and arranging this volume is to open a further view into the wonders of nature, as manifested in the Anatomical and Physiological structure and action of several of the most wonderful of natures productions, and that the subject of its pages may be preserved for the benefit of future generations, and the memory of those strange beings may not be forgotten.

The descriptions of some of these are by the author, from personal observations and examinations; and other descriptions, by such men as WM. N. PANCOST, M. D., of Philadelphia, F. GETCHELL, M. D., of Philadelphia, R. M. TOWNSEND, M. D., of Philadelphia, CALVIN ELLIS, M. D., of Boston, Mass., JEROME KIDDER, M. D., of New York, GEORGE I.

FISHER, M. D., of New York, Prof. A. B. COOK, A. M., M. D., professor of surgery in the Kentucky School of Medicine, Richmond and Louisville medical journals, British medical journals, and many of the leading papers and periodicals of this country and Europe.


The descriptions given by the above and others are so clear, full, and exact, that it would be folly for me to attempt to improve upon them, and therefore I give the language of the several writers.

UNITED TWINS.—I shall attempt to show that *united* twins appear under a great variety of forms, and under very diverse degrees of duplicity. Sometimes the two individuals are complete in all respects, and are found united by the front of the chests and abdomen, or by the backs, or by their heads and scalps, or by the pelvis, or by the arms and sides. It is a rule in Teratology that like parts are always the point of union, and I believe there is no case on record where nature has departed from this rule.



## DIVERSE DUPLICITY.

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REQUENTLY the two united persons are more or less incomplete in consequence of their junction being more intimate and deep at the line of union. The degree of incompleteness which thus occurs varies indefinitely. In some cases they are entirely double, in the upper parts, and single in the lower parts; or in other words, they possess two heads and four arms, but only two lower extremities. Again, others are single above and double below; or have one head and four lower extremities. In these varying degrees of double union, every conceivable gradation is found in the intermediate parts and organs, and the junction, however diverse between the united individuals, conforms to the general law, as above stated, that in the two the same parts only unite to the same parts, and not only muscle only to muscle, bone only to bone, but the same muscle in the one twin unites at the line of conjunction to the same muscle in the other twin,

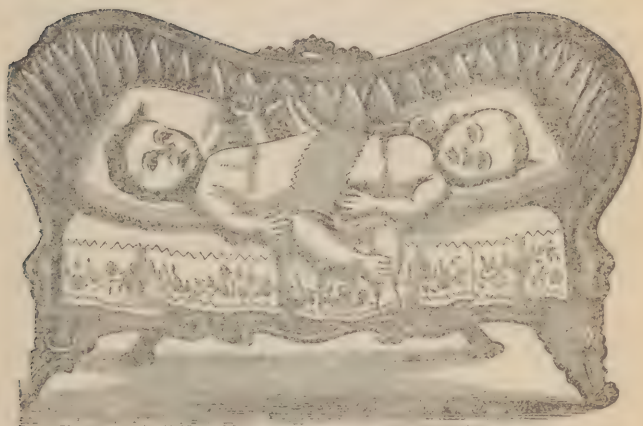
the same bone to the same bone, and the same nerve to the same nerve. The same organ and part, as intestines, liver, pericardium, &c., to the same organ and part in the opposite twin whenever the connection extends to these and other parts.

We may truly wonder at the diversity of nature, yet we always find her true to herself in the anatomical structure of united twins.

We are confident that you will feel well paid for the time you spend in reading this work, and at the same time be filled with wonder and astonishment, at the strange beings described in the following pages, any one of which far excels any one of the seven wonders of the ancients, which were "the Egyptian Pyramid, the Mausoleum, erected by Artemesia, the Temple of Diana at Ephesus, the wall and hanging gardens of Babylon, the Colossus, at Rhodes, the statue of Jupiter Olympius, and the Pharos or Watchtower of Alexandria." All of the so called "*wonders of the world*," combined, will not, in our opinion, compare with "one of the least of these."

Without doubt, the strange beings brought to view in this volume are the most remarkable that the world has ever produced; and the author cannot but hope that the volume will prove an acceptable addition to the libraries of all who are fond of the curiosities of human nature.

## MINNIE AND MINA.



THE AUTHOR'S FIRST VISIT TO THE DOUBLE CHILD, MINNIE  
AND MINA FINLEY.


**T**HIS visit was when this wonderful babe was but a few days old. Having heard that there was a very strange child born in Peru township, Morrow county, Ohio, on the 12th of October, 1870, the author, in company with the following Phy-

sicians and Surgeons, (C. WELCH, M. D., J. H. WHITE, M. D., E. H. HYATT, M. D., J. McCANN, M. D., J. M. CHERRY, M. D., and W. T. CONSTANT, M. D., all of Delaware, Ohio,) started from the above named place, and traveled a distance of about ten miles in a Northeast direction, when we arrived at the residence of JOSEPH FINLEY, the Father of the wonderful child. At this time there were no visitors allowed, but finally they consented to let us see it, as we were *Physicians*, by paying one dollar each, which we gladly did. They had hard work to keep their house from being over crowded with visitors, and thus endanger the health if not the lives both of Mrs. Finley and her wonderful offspring.



## DESCRIPTION.

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E found two perfect heads, one a little larger than the other, but both well formed, and developing a fine mental organization ; two perfect, well formed necks, shoulders, arms and bodies ; to the umbilicus, or navel, which was one in common, two hearts, two stomachs, and every evidence of two perfect beings and separate existences, until they were united at the navel, and here, at this point, the two bodies unite and form one body, and the genital organs are that of one female child. On one side are two well formed legs, extending from the side of the body at an equal distance from each head, and at right angles from the body, perfect in all respects, with the exception of a slight twist in one of the feet. At the other side of the body, a double leg, or two legs united or blended into one ; this extended also at right an-

gles. This double leg terminates in a double foot, on which are eight toes and two heels. This child or children, when lying on their backs may be described as forming a cross ; that is, the body or two bodies united, with a head at each end of the common body, forming one straight line, and the two sets of legs projecting at right angles from the body form another straight line. That the reader may the better understand the form or shape of this wonderful child, we will refer him to the plate. One child would sleep while the other would be awake, or both would sleep at once or be awake at once, or one would cry while the other would keep quiet, &c. We noticed that when one of the children awoke, the arms as well as the perfect leg belonging to, or nearest the head of that child, began to move, and this, also, when the other *end* or child awoke, then its two arms and one perfect leg would move. Indeed, each child had the entire control of the perfect leg nearest to it, while either one had partial control of the double leg. For some time after its birth the smallest one was a little sickly and did not feed well, but at the time of our visit it fed as heartily as the other, and appeared to be doing finely. About that time Mrs. Finley had named them MINA and MINNIE.

The parents of the Double Child, MINA and MINNIE FINLEY, are JOSEPH FINLEY and ANN ELIZA

FINLEY. Joseph Finley was born in Rostraver Tp., Westmoreland Co., Pa., August 18th, 1824, and he removed to Union county, Ohio, in 1845, with his father, James V. Finley, now of that county. Joseph enlisted in the 96th Ohio Volunteer Infantry in 1862, and served in the South and Southwest for three years, during which time he never lost a day from sickness, absence or any other cause. The Mother of the wonderful Double Child, Mrs. Finley, was the daughter of Samuel Markes, formerly from Harrison county, Va., but now of Champaign county, Ohio. She was born in Champaign county, July 28th, 1836, and was married to Joseph Finley, June 6th, 1859. She is rather agreeable in her manners, and is of medium height, rather large in figure, brunette in complexion, with something sweet and kindly in her voice, and in her dark eyes, and with something attractive in her quiet and self-possessed movements and manners. They had three children previous to the birth of this, all healthy and interesting, and nothing peculiar about them. The eldest, a daughter, now (1874) fourteen years old, the second a daughter, eight, and the third a son, five years old. The parents were in fair circumstances, neither wealthy nor poor. Mrs. Finley did not enjoy traveling very much, and would often say that she would much

rather be at home on their little farm, where she always enjoyed herself.

Since writing the above we have learned, through Mr. Finley, that they have another daughter, now (Jan. 24th, 1874,) about six months old. There is nothing peculiar about it, is smart, intelligent, and of course, *beautiful*.

A VISIT TO THE DOUBLE BABY—THE GREATEST WONDER  
OF THE AGE.

On Saturday last, with the two-fold object in view of enjoying a pleasant ride and seeing the wonderful Double Baby, in company with a friend we rode out to the farm of Mr. and Mrs. Joseph Finley, in Peru township, Morrow county. The distance was greater than we were informed, and had anticipated, for instead of being seventeen miles, we found the residence of Mr. Finley to be fully 22 miles from Mt. Vernon. We went directly to the beautiful and thriving village of Sparta, which is eleven miles from here; from thence Westward on the Delaware road to Vail's crossing; here we turned to the right and kept straight on through the village of Pagetown to the second crossing beyond a covered bridge, and then turned square to the right, and in a few minutes we were at Mr. Finley's house. We mention these particulars in regard to the route for the benefit of others who may wish to gratify their curiosity by taking a similar trip. We arrived at the residence of Mr. Finley about eleven o'clock, but that gentleman being out on his farm attending to his business, we were admitted by a young lady, whose entire time appeared to be employed in meeting visitors at the



door and receiving the admission fee, which is 50 cents. And here we may remark that instead of finding anything to condemn in this, we think it is every way praiseworthy and proper; for, if Mr. and Mrs. Finley made a "free show" of their double-baby, their house would be constantly so over-crowded with visitors as to endanger the health, if not the lives both of Mrs. F. and her marvelous offspring. By charging a moderate admission fee, however, the crowd is kept away, and such a sum of money will be realized as to enable the parents to properly take care of and provide for the curious freak of nature which has been placed in their charge by the will of Providence.

After introducing ourselves, we were received in a cordial manner, and invited to take seats. We found Mrs. Finley (who seems to be a healthy, intelligent and pleasant lady, apparently about 35 years of age) seated near a stove, with a pillow on her lap, on which the double-baby was resting, enjoying quiet sleep. She soon uncovered the child or children, and took pleasure in showing *them* or *her* or *it*, as the reader may be pleased to call the curiosity to those present. We found two perfect heads, one a little larger than the other but both well-formed, and developing a fine mental organization; two perfect, well-formed necks, shoulders, arms and bodies; two hearts, two stomachs, and every evidence of two perfect beings and separate existences, until they united together at the navel, and here at this point, the two bodies unite, and form one body, that of a female child. On one side are two well-formed legs, extending at right angles from the body, perfect in all respects, with the exception of a slight twist in one of

the feet, which our townsman, Dr. Russell, (who made an examination a day or two previous) said could be straightened without doing any injury to the children. At the other side of the body, a double leg, or two legs united into one, extend also at right angles. This double leg terminates in a club foot, on which are eight imperfectly formed toes. The child or children, when lying on their backs form a cross—that is the body or two bodies united, with a head at each end, forming one straight line, and the two sets of legs, running at right angles from the body, form another straight line. That the reader may the better understand the form or shape of this child or children, we will state that if they should live and become able to walk, the bodies (preserving their present position) would extend horizontally from the perfect legs, while the imperfect or double leg would project upwards; but it is believed if Providence should be pleased to spare the lives of these two children, their bodies will so bend or be brought together, so as to assume something like an upright position.

While we were examining these wonderful children one of them awoke, and moved itself pretty much as other babies move after sleeping; but the mother, by a gentle rocking of the knee, soon put it into a sleep again. As our visit was short we did not see the child or children fed, (“nurse” we believe the ladies call it,) but Mrs. Finley told us they took nourishment as other children do, each when it is hungry. While one nurses, the other may be asleep, or awake, or crying, or quiet, as the case may be. It is a mistake that if one feeds the other is satisfied; as each craves for food when it is hungry, and will cry, like

any other infant, until it is satisfied. We noticed that when one of the children awoke, its arms as well as the perfect leg, nearest that child, began to move. Indeed, each child has the entire control of the perfect leg nearest to it, while either one appears to have a control over the imperfect or double leg. Mrs. Finley informed us that the smallest of the children for some time after its birth, was a little sickly and did not feed well; but at present it feeds as heartily as the other, and appears to be getting along finely. Mrs. F. says that although she has not determined for certain upon names for her children, yet at present, for convenience, she calls them Minnie and Mina.

Although a great deal has been said and written in regard to a public exhibition of this double child, yet we learn that nothing positively has been agreed upon. To be sure, a man named Brown, an Insurance agent at Cardington, a day or two after the double child was born, came to see Mr. and Mrs. Finley, with a written contract in his pocket, drawn up by a lawyer who accompanied him, and while the parents' minds were greatly distressed, he annoyed, dogged and importuned them, until they signed a contract, agreeing to receive from this man Brown \$50 per month, and he to pay all expenses, to travel with him and exhibit the double baby. Mr. and Mrs. Finley now very properly repudiate the contract, obtained by such illegal and disreputable means; for they can make more money by staying home, and have had ten times better offers from other parties, if they will agree to travel. But for the present they have made no decision as to what they shall do.—*Mt. Vernon (O.) Banner.*

THE DOUBLE BABY IN COLUMBUS.—The much talked of Double Baby was on exhibition at the American House yesterday and caused much excitement. The babe is about five months old, is a curiosity without the repulsive features that we associate with the word monstrosity.

The two faces, one at each end of the body, are genuine baby faces, with baby eyes peeping from them. The little arms and limbs have the baby softness, and even the badly mixed little body, with its baby plumpness and freshness, does not impress unpleasantly. The arms are perfect, and flutter about with that recklessness that is characteristic of babyhood. The two legs on one side are gifted with an ordinary amount of kicking ability. The appendage on the other side, representing a rudimentary double leg, seems stiff, and is not used.

The babies have a delicate look but are both bright and pretty. They don't go partners on a cry, or a laugh, or a sleep, but are independent, and, as before said, utterly reckless as to consequences.

They look much alike, but one has more plumpness than the other, and more contentment apparently in its composition. The two chests and one abdomen may be a little difficult to manage on the partnership plan, and the Little Plumpness may have the best of the bargain.

The parents, Mr. and Mrs. Finley, accompany the babe, and Dr. Besse, Agent, is Business Manager. The babe or babes will remain on exhibition at the American for several days. Visiting hours from 9 to 12 a. m., 2 to 4 p. m., and 7 to 9 o'clock p. m.—*Ohio Statesman*.

SCIENTIFIC EXAMINATION OF THE DOUBLE BABY.—The very curious and interesting double baby, now on exhibition at the Museum at Ninth and Arch, was made the subject of a scientific examination and lecture, yesterday, at the Jefferson Medical College. Dr. F. Getchell, who delivered the lecture, had examined the child at the Museum, and felt so much interest in it that he procured permission to introduce it before the faculty of the College, and medical students. The child was brought into the amphitheatre of the College, in a little crib, nicely adapted to its peculiar form. The crib was then placed on the revolving table, in full view of the audience, the body of the child being covered by neat bed-clothing. At each end of the little bed was a bright and pretty little face, one being plump and cheerful and the other looking a little thin. Both, however, were very sprightly.

As the two faces lay in the crib they gave the idea of two very short babies lying with their heads in opposite directions and their feet in contact. And this idea was strengthened by the fact that while one face was laughing and the one set of hands were playing with Dr. Getchell's pencil, the face at the other end wore quite a sedate expression, and its eyes were looking about in seeming wonderment at the movements of the lecturer and his assistants. Subsequently the child—or rather that end of the double child—which has been laughing and playing hurt itself with a key which it had in its hands, and began to cry, while the face at the other end began to laugh.

When the clothing was removed, the two heads and two sets of arms and hands were found to be attached to one body joined together as if two separate babies

were cut through the middle of the abdomen, just at the waist, and then the two upper halves united at that point. There is a fully developed set of shoulders to each head, and a fully developed chest or thorax to each, but from the breast or chest at one end to the breast or chest at the other, there is only one trunk. On one side (the left side of the plump baby), just where the waists of the two come together, there are two hips and two well-formed legs, extending at a right angle from the body, like extending arms. These look as if the lower half of one end of the babies, from the middle of the abdomen down, had grown out of that side, and this part of the body performs the functions for both heads and the half bodies attached. On the other side, also extending from the waist at a right angle, is a long excrescence, composed of the bones and toes of two other legs, enclosed in one skin, and having the appearance of one deformed leg.

The photographs and other published pictures give a very fair idea of the child, except as to the two bright, pretty little faces which it is a real pleasure to look at. It is the only exhibited curiosity we have ever seen that has not been exaggerated in the description of it. In this case the simple truth and fact are so strong that there is no room for exaggeration. Dr. Getchell states that the child was born in Morrow county, Ohio, October 12th, 1870, and is now about seven months old. The birth was natural and easy, so much so that the child was born half an hour before the doctor who had been sent for arrived.

At birth it weighed about twelve pounds. The mother was healthy, and was not aware of any circumstances to account for the peculiar and very extraor-



dinary form of the child. Since its birth it has been healthy, suffering only from the common complaints incident to all children in early infancy. The mother at first nursed both heads, until recently, when she found that she had not milk enough, and one being rather less strong than the other, she now nurses the feebler one only, and the other is fed from a bottle.

The circulation of the blood at the two extremities of this double child is perfectly independent. The pulse, at the wrist of one set of arms had, upon examination, been found to be six beats faster than that of the other, while the prick of a pin or pinch of the shoulders attached to one head is not noticed by the other. Sometimes one is asleep whilst the other is awake and playing, and again both are asleep.


This curious being is of an exceedingly rare class of what the medical books call "monsters." There are plenty of cases of deformities in the upright positions, where two persons are joined together; but specimens of this class have been very rare, and have generally died very soon after their birth. They are almost always females. The lecturer had never heard of one of the male sex. Engravings of two cases nearly similar to this were exhibited by the lecturer, one of which was in a medical work in Latin, published in the seventeenth century. That one lived but a few days. There was another almost precisely similar birth in Spain, in the early part of this century, but that one also died, after an existence of five days. The present one, the lecturer thought, had a fair chance to live, as it digested and assimilated its food as other human beings do.

It may be in the above description that we have sometimes spoken of this extraordinary being as one,

and sometimes as two; but this is because it is nearly impossible to use precise language in the description of that which even science fails to tell us whether it be one child only, or two in one.—*Public Ledger*, Philadelphia, May 10th, 1871.

## OPINIONS OF THE PRESS.

---

 ALL of the most remarkable and interesting freaks of human nature that we or any one else ever saw, is the double or two headed baby, now on exhibition in a room joining the American House in the city. There have been numerous instances of children being born with some strange deformity, but they have either been still born or expired shortly after birth. These children, or child, for there are two distinct beings, inseparably connected—are healthy and robust. When we called to see them about nine o'clock in the evening both were peacefully sleeping. They have remarkably fine shaped heads, and are very bright and beautiful children. Several physicians have called to see them, and all say they never saw so singular a freak of nature. The children repose on their back, with heads

in opposite directions, having one abdomen with legs projecting from the centre of the side, at right angles to the body. They have the appearance of long life, but it is sad to reflect, while looking at the pretty and playful babes, what a comfortless and miserable existence their deformity would doom them to if they should live many years.—*Daily State Gazette*, Trenton, N. J.

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CITY INTELLIGENCE—A DOUBLE-HEADED CHILD—THE CURIOSITY OF THE DAY.—Mr. Robert F. Simpson, the manager of the Philadelphia Museum, at Ninth and Arch streets, being ever ready to cater to the amusement and curiosity of our citizens, has, at great expense, procured the most wonderful monstrosity of the age, far outdoing the double-headed girl. It consists of a double-headed baby. Yesterday an examination was made of it in the lecture room of the Jefferson College. It was witnessed by many prominent professional gentlemen. Among whom were Professors Gross, Pancoast and Rand, of the College, Drs. Maury, Gross and Pancoast, Edward Shippen, Esq., and many others.

Shortly after twelve o'clock Dr. Getchell, the clinical lecturer upon diseases of women and children, made his appearance, and the infant being brought in and placed upon the table, the doctor proceeded to enter into the history of monsters in general, and of the little wonder in particular. He stated that Dr. Gross has been summoned to see the infant at the Museum, and had called him in to consult with him. Together they had come to the conclusion that the infant was an object of such interest as to merit the attention of the medical public. Through the kind-

ness of Mr. Simpson they had been enabled to present it at the present lecture.

The child was born in Morrow county, Ohio, upon the 12th day of October last, and is now accordingly about seven months old. Its delivery was easy and natural, its birth being accomplished before medical attendance was called. There was one cord and one placenta for the new-comer. It weighed at its birth twelve pounds, and was in all respects a hearty, healthy child. Since its birth the child has enjoyed good health, suffering only from the slight and natural ailments of early infancy. One child was larger than the other, but both are in a healthy condition at the present time. The child has two heads, both of which are vivacious and even pretty. It has one continuous spine, with what might be called three legs, two perfect legs, and one composed of two legs united together with one compound foot and eight toes. In other respects it resembles other children. The Doctor then entered into the history of similar monsters, and showed a number of portraits from antique and contemporaneous works of creatures of the same conformation. In conclusion, he said that, on the whole, this infant must be regarded as unique, as it has lived longer than any of its predecessors in monstrosity, and still gave promise of long life to come. The curiosity will be on exhibition at the Museum for some time.—*The Age, Philadelphia, Pa.*

AN INFANT MONSTROSITY—THE FIRST LIVING CREATURE OF THE SPECIES KNOWN TO SCIENCE—CLINICAL EXAMINATION AT THE JEFFERSON MEDICAL COLLEGE.—The lecture room of the Jefferson Medical College was filled at noon yesterday to witness the clinical examination of a wonder in physi-

ology, the two-headed baby. There were present by invitation a number of distinguished gentlemen, physicians, public men, and scientists. Among the former were Professors Gross, Pancoast, and Rand, of the Jefferson; Drs. Gross, Maury, and Pancoast; Edward Shippen and William V. McKean, Esq., and others.

Shortly after twelve o'clock Dr. Getchell, the clinical lecturer upon diseases of women and children, made his appearance, and the infant being brought in and placed upon the table, the Doctor proceeded to enter into the history of monsters in general, and of this little wonder in particular. He stated that Dr. Gross had been summoned to see the infant at the Museum, and had called him in to consult with him. Together they had come to the conclusion that the infant was an object of such interest as to merit the attention of the medical public. Through the kindness of Mr Simpson they had been enabled to present it at the present lecture.

The child was born in Morrow county, Ohio, upon the 12th of October last. Its delivery was easy and natural, its birth being accomplished before medical attendance was called. There was one cord and one placenta for the new-comer. It weighed at its birth twelve pounds, and was in all respects a hearty, healthy child. Its mother had not been frightened, and had not anticipated giving birth to any but a natural child. Since its birth the child has enjoyed good health, suffering only from the slight and natural ailments of early infancy. One child was larger than the other, but both are in a healthy condition at the present time.


The child has two heads, both of which are vivacious and even pretty. It has one continuous spine,



with what might be called three legs—two perfect legs, and one composed of two legs united together, with one compound foot, and eight toes. In other respects it resembles other children. In conclusion, he said that, on the whole, this infant must be regarded as unique, as it had lived longer than any of its predecessors in monstrosity, and still gave promise of long life to come. Altogether the lecture was an exceedingly interesting one, and listened to with profound attention by the audience.—*The Bee, Philadelphia, May 19, 1871.*

## AGENT AND PHYSICIAN.

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HE author became the agent of Mina and Minnie Finley on the 4th of March, 1871, whose business it was to travel and exhibit them and also act as their physician. At this time they were near five months old. The first place visited was Columbus, Ohio, at the American House, where they were visited by many of the leading citizens and physicians, and also many of the members of the Ohio Senate and House of Representatives. The next place was Newark, Ohio, at the Preston House ; had many visitors of all classes. Zanesville, Ohio, at McIntire House, had a large number of visitors. The next place was Pittsburgh, Pa., at Burnell's Museum, for one month ; stopped at the

Robinson House, was visited by 25,000 persons, and the last day had 1,400 visitors. Next place, Harrisburg, Pa., at Brant's Hall. Reading, Pa., at Keystone House, exhibited in Aulenbauch's Hall. From this we went to Philadelphia, at the New American Museum, corner of 9th and Arch streets; remained here one month, from May 15th; had about 1,000 visitors per day. Trenton, N. J., at American House. New Brunswick, N. J., at Bull's Head Hotel, exhibited in Greer Hall. Elizabeth, N. J., Lafayette House, exhibited in Arcade building. Newark, N. J., City Hotel, exhibited in Library Hall. Here Mina was taken very sick, on the evening of July 4th, and had a severe attack of Cholera Infantum, and came near dying, but after a few days she speedily recovered her usual health. This did not seem to affect Minnie at the time, but she being rather the most delicate of the two, and fearing that she would get sick and probably die, we thought it best not to stop in New York City but start direct to Boston, Mass., it being probably one of the most healthy cities in this country. Therefore on the 15th of July, at 5 P. M., we embarked on board of one of Admiral Fisk's superb steamers, the Bristol, plying from New York to Boston by the way of Long Island Sound; (this boat and its mate, the Providence, are said to be the finest in the world,

their cost being over one million dollars each.) Commander Simmons, with whom we had an introduction, is evidently the right man in the right place, and knows how to run a large steamer, and the steward, McGowen, is a gentleman, and knows how to treat passengers to a sumptuous repast. Our comfort and safety had been thoroughly provided for. The officers of the boat knowing that we were on board commenced slipping into the stateroom where Mrs. Finley and the children were, all anxious to see the wonderful Double Babe; and pretty soon the news got out among the passengers, and of course admission could not be granted them, but, by special request of some of the officers, we gave a short lecture and free exhibition in the magnificent parlor of the boat, with which that vast crowd seemed filled with wonder. (This offered an excellent opportunity of advertising us in Boston.) We speak more particularly of this trip and exhibition, as it was the last traveling and last public exhibition ever given of them. After this pleasant trip we arrived in Boston on the morning of July 16th, and stopped at the Temple House, where the children died. Our party consisted of the DOUBLE BABE, Mrs. and Mr. FINLEY, Mrs. CARRIE ROBINSON, (the nurse,) and the author.

## EDITORIALS.

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 HERE is now on exhibition in Columbus the greatest living curiosity the earth ever saw. It is one child with two heads, or two children with one body. It was born in Morrow county, this State, and is now nearly five months old. One head is where it belongs, and the other is where the feet should be, while the feet put out from the side. The two faces are singularly bright and beautiful. One sleeps and one laughs, then t'other laughs and one sleeps. Then both sleep. Go to Columbus at the American House and see it all this week. We have a photograph at our office.—*Kenton Republican, Ohio.*

THE DOUBLE BABY—IMPRESSIONS.—Everybody who sees the double baby comes away with a feeling that cannot be expressed. Curiosity has been satis-

fied, and there is a better and warmer feeling with it. No one can look at the two sweet baby faces, see the two pairs of bright eyes, hear the two cooing voices, and say "monstrosities." The little prattlers strike too near the heart for that, and as there is nothing of the show atmosphere about them nor no officiousness about the parents, the visitor stands in the presence of the little two-souled being as he would stand in a parlor—stands half abashed in the presence of the little wonder, and is as much startled when one pair of little hands reaches out for his whiskers as he would be to see a marble statue raise its arm and strike. Everybody who sees the babes loves them, and where there had been sneers and jests there are kindly thoughts and earnest words.—*Ohio State Journal*.

GO AND SEE IT.—The wonderful Double Babe, the greatest living curiosity in the world, will arrive from Columbus on the noon train of to-day (Friday,) and will be on exhibition at the Preston House for a short time.

Doors will be open from 8 to 12 A. M., from half past 1 to 4 P. M., and the evening from 7 to 9 o'clock.

No one should fail to see this anatomical and physiological curiosity.—*Newark American, Ohio*.

The Morrow County Double Baby, the greatest living curiosity in the world, is now on exhibition at the Preston House, in this city, where it will be shown for a few days. Whilst in Columbus it was visited by thousands. It is accompanied by its parents and a physician.—*Newark American, Ohio*.

The Double Babe, the most wonderful curiosity in the world, over five months old, handsome and



healthy, is still on exhibition at the McIntire House. To-morrow, Friday, March 31st, will be the last day our citizens will have an opportunity of seeing these wonderful children. They are pretty, intelligent, and nothing whatever repulsive in their appearance.—*Zanesville (O.) Courant*.

The Double Babe will be on exhibition at the McIntire again to-day, which will afford the last opportunity of seeing it here. During its stay here, visitors have been quite numerous, and these little cherubs will make a fortune for their unfortunate parents. They are beautiful children and can boast of being the greatest living curiosity in the world.—*Zanesville (O.) Courier*.

BURNELI'S MUSEUM.—Beauty has often tempted "Justice to break her sword," and beauty, in a more quiet and far more wonderful way, all day yesterday and last evening wielded a power, drawing throngs to witness the beauty of the greatest of living curiosities, "The Double Babe," placed on exhibition yesterday at the almost fabulous cost of five hundred dollars per week. Oure itizens, by their numerous attendance, endorsed the bold manœuver of the Major, and the confessed beauty of the child.—*Pittsburg Daily Dispatch*, April 4th, 1871.

THE GREAT FREAK OF NATURE.—All who have seen the double baby on exhibition on the first floor of Brant's hall, account it as the most marvelous freak of nature they have ever examined. It even surpasses in peculiarity of formation the two headed negro girl, and is far more attractive. The baby will be exhibited to-day and to-morrow for probably the last

time in Harrisburg. This being the case, those who have not seen it should repair to the first floor of Brant's at once.—*Harrisburg (Pa.,) Paper.*

A FUNNY BABY--OR IS IT TWO?—The deviation of man from the normal type of his creation has always been regarded with deep interest, and has from the earliest ages attracted a great deal of the attention of scientists and philosophers. No wonder then that the appearance of a little human being in our midst, who is entirely a novelty among the infants of its day and generation, should move the medical circles of the city to their depths. This movement found expression yesterday in the appearance of the little curiosity at the regular Thursday clinic of the Jefferson Medical College. The upper lecture room was thronged with the votaries of science and the lovers of the curious, and the arena in the midst of the amphitheatre was occupied by a number of distinguished gentlemen, professors of the college and prominent physicians. At a few minutes after twelve o'clock Dr. Getchell, the lecturer on clinical midwifery and the diseases of women and children, made his appearance in the arena, and the object of the day's lecture being cited to appear, was borne in upon a little light bed especially constructed for its famously unique babyship.

The infant is a girl (we might be pardoned if we said two girls), but so curiously and originally divided in the back, as to have two heads and an attempt at four legs. The heads are directly fronted with two sweet baby faces, much resembling each other, although one is larger, fuller, and fresher than the other, as one part of this ingeniously constructed creature is healthier than the other. Two of the legs

the one coming from the healthy side of the common body is larger and altogether healthier looking than the other. But in addition to these there is a third leg, which, marvelous to say, bears every appearance of being two in one, looking very much as if in the moulding of the limb the molten fund of the prospective infant had got mingled and welded together.

It is truly one limb, but it is two in one, as is shown by the eight toes, two of which are great toes. The legs all come out at right angles to the common body, the two on one side and the compound leg on the other. The intestinal and lower secretory and excretory organs of the infant are common to both parts. The circulation and respiration of the two parts, however, are quite distinct. Their pulses are unequal in frequency, and one, although in good health, is much less perfectly nourished than the other. They live quite independently of each other although so inseparably united. The one may sleep while the other is awake, and one may ail a little while the other is enjoying its usual health. All this and much more was developed by the remarks of the distinguished lecturer, who exposed the infant to the most careful examination, and showed it in all its wonderful malformation to the spectators. He entered also into a history of the theory of such malformations and placed the child under its appropriate class.

It has had predecessors in the like deformity, but has outstripped them all, living seven months, while no one of them has given the world its presence for more than a few weeks. Nothing remarkable attended its birth, and when it came into the world it weighed twelve and a half pounds. It has always been are completed and natural in every respect, although

healthy, and stands a fair chance of attaining a considerable age.

We should gladly give the doctor's very interesting lecture in full, but our space forbids. The infant wonder, it is our privilege to add, is now, and will be for some time, on exhibition at the New American Museum, to the courtesy of whose manager, Mr. Robert F. Simpson, the public is indebted for the present opportunity of becoming acquainted with his interesting little charge.—*The Day, Philadelphia, Pa.*

We have before us a photograph, taken from life, of one of the most wonderful freaks of nature ever presented to the notice of the public, that of a double child, whose parents, Mr. and Mrs. Joseph Finley, with their offspring, are now in Zanesville, Ohio. This child, or these children, Mina and Minnie, were born in Peru township, Morrow county, Ohio, Oct. 12th, 1870, and are now five and a half months old. The connection is at the pelvis—in other words, there are two heads, four arms, two chests, one abdomen, one pelvis, one set of pelvis organs, two legs proper and an appendage on the opposite side representing a rudimentary double leg. There is nothing the least repulsive in their appearance and they are as sprightly and playful as any children of their age usually are. One sleeps frequently while the other is wide awake, cries while the other laughs, and, to all appearance, they are two individuals blended into one body. Many people have visited them, and all agree that it is the greatest anatomical and physiological curiosity they ever beheld. The two legs on the left side are distinct, as one is moved by one end and the other by the other. The double leg is governed, in a measure by both. The heads are at opposite ends

and the faces are pleasant to look upon. This curiosity is shortly to be exhibited in Pittsburg for about a month, then in Philadelphia, New York, and the eastern cities.—*New York Clipper*.

The following was written by a minister of the Gospel, belonging to that highly esteemed denomination called Friends, or Quakers, who visited those children several times while they were in Philadelphia, with many of his Quaker friends, and the author is sorry that he has forgotten the name of this good man; his article was published in the *Burlington Gazette* of June 17th, 1871, and is as follows:

A STRANGE UNION.—We do not hesitate in the conviction that existence is a boon from Deity, always bestowed with a benevolent intent, and always designed in some manner to promote the glory of God. In contemplating the *lusus nature* we give no place in the theory of chance. Cowper, the Christian poet, says:

“ Did not His eye rule all things, and intend  
The least of our concerns, (since from the least  
The greatest oft originate,) could chance  
Find place in His dominion or dispose  
One lawless particle to thwart His plan,  
Then God might be surprised, and unforseen  
Contingence might alarm Him, and disturb  
The smooth and even course of His affairs.”

We would not willingly rank with those who regard with mere gaping curiosity, or with disgust, those peculiar and monstrous creations which startle us

with their strangeness and which should enlist our sympathy as philanthropists.

Among what are sometimes called "freaks of nature," the most wonderful we have ever known was a human babe born in Morrow county, Ohio, on the 12th of October, and now living and in perfect health at the age of about eight months. A clinical examination was recently held at the Jefferson Medical College, and was the subject of an interesting scientific lecture by Dr. Getchell,—Dr. Pancoast and other distinguished physicians being present.

It is a question whether to speak of the interesting creature in the singular or the plural number. There seem to be two distinct spiritual existences, but only one body. There are two heads with intelligent and even beautiful countenances, connected by one trunk or body, and one apparently continuous spine, (though in reality there are two.) There would seem to be two complete pairs of arms, two perfect legs, and a third, which consists of two legs united and a compound foot with eight toes. There is nothing repulsive to the sight. The faces are not merely pretty, but are likewise vivacious and happy looking. We have observed them carefully on several occasions. We have seen on either face smiles of unusual sweetness, and expressions of pleasure independent of the other. We have seen the one awake and sprightly while the other was in a deep sleep—again we have seen both expressive of delight, but have not noticed in either any token of discomfort.

It is very common to hear from strangers the hope that they will not live. But why should any feel thus, if we recognize a Providential permission and design, and the possibility of their blissful future,




and of their being formed for a lesson to others of the gratitude due to our Father in heaven for the gifts which, though withheld from them, are bestowed upon us? Surely it should incite us to take heed that those gifts shall not have been bestowed in vain. Hundreds have spontaneously declared the duty of thankfulness for the possession, in themselves and in their children, of perfect, mental and physical formation, showing that upon them the teaching is not lost. Should their lives be spared, (and there is no apparent reason to the contrary,) what benefit may result to natural and mental science, or what materialistic dogmas may be confounded. We see no reason why life should not be a high enjoyment to them. They are likely to be beyond pecuniary need, and to have secured to them all the ministration suited to their personal need. Their minds will most probably develope, they will unquestionably, if they live, have some original method of locomotion. They are objects of redemption and salvation, and may be enabled to realize the last verse of the book of Psalms: "Let everything that hath breath praise the Lord."

"Let no presuming, impious railer tax  
Uneering Wisdom, as if aught were formed.  
In vain, or not for charitable end."

## RECEPTIONS OF DOUBLE BABE.

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HEY always met with a kind and hearty reception wherever they were exhibited, and were highly commended by all who saw them for their being the greatest curiosity that has ever lived in human form, and also for their beauty and intelligence; and there seemed to be a peculiar charm about them that drew large crowds to see and admire them, and who always expressed marks of sympathy, admiration, wonder and astonishment. All ranks and classes visited them, and the greater portion of visitors admired their beauty, intelligence, and loveliness, many saying that they were the most beautiful children that they had ever beheld.

“None like me since the days of Eve,  
None such, perhaps will ever live.”

## QUESTIONS ASKED BY VISITORS.

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**I**N what part of the country were these children born? Answer: in Morrow county, Ohio. How large a place is that; is it as large as Philadelphia? Answer: O yes, it is the greatest State in some respects of any in the Union; it has furnished more fighting Generals, and more beautiful women, and without doubt the most wonderful *baby* the world has ever seen. Then the old Philadelphia lady, looking very wisely over her glasses, said: well, did you ever? Question by an old Irish lady: and now, sir, did you say, sir, that the one women had the two childers? Answer: O no, I did not say so, but it is not supposable that the mother had one, and the colored nurse woman had the

other. Then she said, well, I was born in Ireland, and crossed the seas, and never saw the likes o' that before. Then a wise looking old gentleman asks if they *envelope* like other *childers*. Sometimes one would be asleep while the other was awake, when the question would be frequently asked, they are not both alive are they? One day, at Pittsburg, a rough looking old gentleman came in and said he was a Doctor, and wanted to see the Double Baby, and, after looking at them awhile, he asks, in a self important way, what is there peculiar about them, it is nothing but two children stuck together, isn't it? Answer: that is all, but rather a good job is it not? Then he said, cover them up, that is all I want to see of them. He then asked, where is the mother? I will give five dollars to see her. Why do you want to see her? Because I want to *ax* her some *sci*, *scion*, *seiontific* questions. (This he was not permitted to do, fearing that he was too *deeply learned in science* for any ordinary person.) Question by a beautiful little girl of about five summers: please sir, will you tell me which is the oldest of the two? (at this the whole audience began to laugh.) Yes, my little dear, you are the only one out of many thousands that has ever asked that question, and I am glad that I am able to answer it. Mina is a very little the oldest, and you see also that she is the largest. This seemed to en-

tirely satisfy the little beauty. Question by a *smart looking* old lady : has the mother any other children ?

Answer : yes, three. And are any of them like these ?

Answer : no. Well don't you think that is strange ?

Well goodness gracious, says an old lady, I have had seventeen children and none of them was like this one. Wasn't that strange ? Says a gentleman one

day, in Reading, Pa., in company with five or six ladies : oh ! see how strangely they are *grown together*.

now, sir, will you be kind enough to show us the *connection* ? Question at another time : Does the mother travel with them ? Yes.

And is she *alive* ? The question was asked a few times : What does their mother let them live for ?

These are but a few of the strange questions asked by visitors. One of the most common questions by ladies was :

are you their father ? And the most common by gentlemen was : Where is the mother ?


A very common expression by ladies in the Eastern States, on first seeing them, was, Well, did you ever ! or, Oh, you sweet little angels ! or, Oh, you little beauties, how I would like to get a hold of you, etc., etc.

## BICEPHALIC MONSTROSITY — ISCHIOPAGUS TRIPUS.

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BY RALPH M. TOWNSEND, M. D., of Philadelphia.

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 HERE is at present on exhibition at Simpson's Museum in this city a pair of twins whose mode of union is remarkable, and are rendered unique by their thriving and comparatively lengthy life.

These twins were born in Morrow county, Ohio, October 12th, 1870, the delivery being natural and easy and accomplished half an hour before the arrival of the attending physician. By reference to the accompanying photograph it will be seen that these babes have a common trunk, terminating at either extremity in a well-shaped neck and head. Each end of the trunk is formed of a perfect thorax with its contained viscera, then comes the swell of the belly, and the children insensibly grade into one another. As



they lie extended upon their backs they look as if two children had been cut transversely across at their umbilici, and then accurately welded together.

Exactly in the centre of their common abdomen is a scar, marking the attachment of the umbilical cord, of which there was but one, along with one placenta, and these of usual size.

Springing at right angles from the right side of the abdomen is a well-formed pelvis supporting a perfect pair of legs and feet, with the exception that one of the latter is in a condition of equino-varus. To these extremities are attached the genital apparatus and anus of an ordinary female child. Upon the opposite side of the abdomen there appears to be a rudimentary pelvis in the shape of an ilium, feeling under the skin something like a scapula. Branching from this, also at right angles to the body, is a compound rudimentary leg, its anterior aspect looking backwards, terminating in a foot containing two ossa calcis and eight toes,—the great toes being outermost, and the lesser ones side by side.

When the child lies upon its belly, with its arms folded into the side and its legs extended, it is cross-like in shape,—one arm of the cross represented by the rudimentary leg being somewhat twisted and deficient. The spines, on first inspection, seem to be continuous, but closer examination shows that they come together like two J's with their crooks laid end to end, the crooks turning towards the right and being attached to the complete pelvis.

One of these children is ruddy, muscular, and full of vigorous vitality; but the other is thin, its chest is deficient in development, and its face looks prematurely old. The mother at first nursed them both!

but now gives all her milk to the smaller child, feeding the larger one from the bottle.

The father of these children is a tall, gaunt Pennsylvanian, forty-three years old, a farmer; the mother is an Ohioan, thirty-three years of age, of massive frame and heavy face. She has had three other children, all healthy, the eldest being thirteen years of age. She knows of no cause to which to ascribe the production of such strange progeny.

The pulse of these children is not uniform, beating at one examination six times faster to the minute in the arm of one child than in the arm of its companion. Their sensation is also different. One does not feel when the other is pinched; one feeds while the other sleeps; and their separate attentions are simultaneously attracted by different objects. It is the opinion of their physician, Dr. H. Besse, of Ohio, that they have separate bladders, owing to one bearing down and making water, and a few minutes after the other, with like exertion, repeating the operation. The history of these cases, however, is that they have but one bladder and one rectum.


These children were placed at the disposal of Dr. S. W. Gross, to whose courtesy I am indebted for the opportunity of making this report. They were also the subjects of a clinical lecture at the Jefferson Medical College, by Dr. F. H. Getchell, who ranked them in the order *Catadidyma*, genus *Ischiopagus*, and species *Ischiopagus Tripus*. To show how typical this child is of its class, the lecturer exhibited cuts of three similar cases, one born in Oxford, England, in 1552, one in Ceylon, many years after, and one in Cadiz Spain, in 1818. The former two died at birth, the latter survived five days. This then is a much

greater curiosity as a representative of a recognized class, all recorded cases of which have died at or soon after birth, than if it were a mere chance formation.

The history of all double monsters is, that the death of one is immediately followed by the death of the other, and the present case seems to afford no chance for deviation from this law. At present their digestion and assimilation are good. They are visited daily by hundreds of people, and maintain rare infantile good humor in spite of the somewhat awkward handling and examining they are oftentimes subjected to. Overwhelming curiosity, however, gives way to a shade of regret on many faces, that coming years, if allowed them, can only replace present attractiveness by pitiable deformity.

## DEATH OF THE DOUBLE CHILD.

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HEIR death presented a strange appearance, and excited the curiosity and pity of all present. They were nine months and six days old, and died at the Temple House, No. 6 Bowdoin street, Boston, Mass., July 18th, 1871. They had always enjoyed excellent health from their birth until July 4, when on exhibition in Newark, New Jersey, Mina showed symptoms of illness, and had a severe attack of cholera infantum, and came near death to all appearance, and remained so for about three days when she commenced recovering very rapidly. This sickness seemed to affect Minnie but very little at the time, but about the 11th Minnie was attacked with continual vomiting, which was very dif-

ficult to manage, and this tendency of sickness at the stomach continued more or less until about 8 o'clock on the morning of the 18th, when she had several light convulsions, after which she sank gradually until 4:35 in the evening, when she breathed her last, and the heart belonging to her stopped beating. She was dead to all appearance, without a struggle, and looked as if sleeping pleasantly, in which condition she remained for one hour and forty-five minutes, when she commenced gasping for breath, and artificial means was resorted to to restore respiration. This gasping continued at short intervals until 7:15 when she gave the last gasp.

After this Mina, who had been perfectly well, to all appearance, until Minnie stopped breathing, showed signs of uneasiness, and continued sinking very rapidly and died at 8:15, just one hour from the time that Minnie gave the last gasp for breath. They both died very easy, and looked as if going into a pleasant sleep and never gave a struggle, and now they are quiet and lovely to look upon in death as they always were in life. The two souls have passed from the one body to the God that gave them this truly wonderful and curious body.

They apparently escaped the ordinary suffering incident to death, for the countenances had the expression of sweet repose. Through the influence of

myself and several of the leading physicians of Boston we had a fine plaster cast taken of the child, which I can have duplicated at any time for the benefit of science. After this we had a *post mortem* examination, which revealed many wonderful curiosities, both in anatomy and physiology, a full account of which is given in this work.


The body of the child, or children, was carefully embalmed and put into a casket containing alcohol and having glass facings which afford a good view of the body, which is well preserved. In the casket the child looks natural and appears as if in repose. It has been brought by the parents to their home, near Ashley, where it yet remains.

Since writing the above we have learned that they have been buried.



## AFTER DEATH.

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AKE the pillows from the cradle  
Where the little sufferers lay ;  
Draw the curtains, close the shutters,  
And shut out the beams of day.

Spread the pall upon the table,  
Place their lifeless body there ;  
Back from off their marble feature,  
Lay their auburn curls with care.

With their little blue-veined hands  
Crossed upon their sinless breasts,  
Free from care, and pain, and anguish,  
Let the double cherub rest.

Smooth their common shroud about them ;  
Pick their toys from off the floor ;  
They with all their sparkling beauty,  
Ne'er can charm their owners more.

Take their little shoes and stockings  
From the mourning mother's sight ;  
Their little feet no more will need them,  
Walking in the fields of light.

Parents tired and worn with watching  
Through the long dark night of grief,  
Dry your tears and sooth your sighing—  
Gain a respite of relief.

A mother's care is no more needed  
To allay the rising moan ;  
And though she has to leave them,  
They can never be alone.


Angels bright will watch beside them  
In their quiet, holy slumber,  
Till the morning, then awake them  
To a place among their number.

## AUTOPSY OF THE DOUBLE MONSTER (ISCHIOPAGUS TRIPUS) BORN IN OHIO, AND LATELY EXHIBITED IN BOSTON.

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By CALVIN ELLIS, M. D. Read before the Boston Society  
for Medical Improvement, July 24, 1871.

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N the *Photographic Review*, Vol. 1, No. 5, Dr. R. M. Townsend has published a description of this monstrosity, in connection with an admirable photograph of the same.

As will be seen on reading this article, the *post-mortem* examination has disclosed the fact that the spines were continuous at the lower portion and united with the fully developed pelvis.

Notwithstanding the act of micturition suggested to Dr. Besse that separate bladders existed, from each of which urine escaped, but one was found, from which the single urethra passed to the common vulva.

A discrepancy exists between the article above referred to and the communication of Dr. Ainsworth,

with reference to the existence of one or two umbilical cords and placentas. The question being one of fact, no opinion is expressed in the matter.

The following history of the monstrosity is communicated by Dr. F. S. Ainsworth, of Boston:—

“The facts rest upon the authority of the mother and the physician retained to attend them. They were given to me and Dr. Fabyan, who attended the children in their last sickness.

“The mother was a robust and healthy woman, having had three children before the birth of the twins. She did not recollect the occurrence of twins in any of her family. Her pregnancy was not attended by any unusual symptoms. There was no physician present at the time of labor. The largest child came first, without more pain than usual, and began to cry as soon as the head was delivered. The time of greatest suffering was when the common abdomen was passing the soft parts. This was due to the fact that its longest diameter was at right angles to that of the vulva. After delivery, the cries of the larger child with the violent action of the diaphragm, gradually brought the smaller one to life. There were two placentas and two umbilical cords. The weight of both children, after birth, was  $10\frac{1}{2}$  lbs.

“For a few weeks the mother was able to nurse both children by bending the bodies so as to reach each breast. In a short time she was unable to do this, on account of the growth of the children, and continued to nurse the smaller child, feeding the larger one from the bottle. All the sensitive functions were entirely distinct; one child would be asleep and the other awake and playing. While one was making efforts to evacuate the bladder or rectum, the other

was entirely quiet. Irritation of the skin of one was unnoticed by the other. Scratching the skin of the fused leg was felt only by the one nearest the part. The growth and nutrition of both children was about as usual."

Dr. Wm. Goodell, of Philadelphia, in the *Medical Times* for June 15th, 1871, p. 332, has given other particulars which now possess additional interest. He says:—

"This monstrosity consists of two individuals, fused together, on a common longitudinal or vertebral axis, by one pelvis common to both. Each pole of the common vertebral column terminates in a head, whilst each individual is normally developed as far as the pelvis. On one side of this appear two perfectly-formed legs, one of which belongs exclusively to Mina, the other to Minnie—a fact proved by tickling each foot alternately. Between these limbs are situated one anus and one set of the external genital organs of a female. On the opposite side of the pelvis projects a rudimentary limb, made up of lateral halves, contributed equally by each individual. It contains a broad femur deeply furrowed in the median line, two tibiæ and two fibulæ, and ends in a foot furnished with two calcanea, two big toes, and six little ones. This fused or siren limb is so twisted on its axis that its heels look upward—while the children are lying on their backs—conveying the impression that the half of this limb nearer to the one child belongs the other child. The vascular and nervous systems of each individual are independent and distinct. Thus, the pulse in one beats faster than that in the other; one—as you observe—is now asleep and motionless, while the other is awake and

playfully tossing about its arms and leg. One of these children is weak and puny, the other healthy and active. A few weeks ago, a change of milk at Columbus, Ohio, disagreed with Minnie, who became quite sick with a diarrhoea, while Mina, being more robust, remained as well as usual. It was now noticed that green and liquid stools alternated with those of a feculent character. Ordinarily, the act of defecation in the one child seems to excite peristaltic movements in the bowels of the other, as shown by two copious evacuations in quick succession. These facts lead me to think that each individual is provided with its own alimentary canal, which unites with its fellow to form one common rectum. They also have probably but one bladder between them. Thus, separated by brain and intelligence, are distinct individuals as regards the more vital organs, they yet share in common the more degraded apparatuses of animal life."

Dr. G. J. Fisher, of Sing Sing, N. Y., in the same Journal for July 15th, 1871, page 376, published an article upon the same subject, the greater part of which we reprint.

"In my sympathetic essay upon Diploteratology, which for want of leisure still remains unfinished (two hundred pages of text and thirty-three lithographic plates, containing one hundred and twenty-six figures, is all that has thus far been published), I have described sixteen cases which belong to the same generic group as the Ohio case—viz: *Ischiopagus*. The group is divided into the complete or symmetrical and the incomplete or non-symmetrical forms. The symmetrical ischiopagus is characterized by the union of two entire fetuses in such a manner that their pelvis form a common ring or basis, the



right pubic bone of one individual forming a junction with the left of the other, and *vice versa* on the opposite side. The common axis of the symphyses pubis is at right angles to the common vertebral axis. The heads are situated at the distal extremities of the longitudinal axis of the compound body; the abdomens are fused; single umbilicus and funis; one bladder; two rectums; two sets of genitals; four pectoral and four pelvic extremities; vital organs normal and independent.

“I have given details of eight cases (*Trans. Med. Soc. State of New York*, 1866, p. 242 *et seq.*) of symmetrical ischiopagi, differing from the Ohio case only in having four legs instead of three—viz., Cases 25, 26, 27, 28, 29, 31, 32, 33 and 34. Dr. Goodell's eighth case, of which he was informed by Pro. Leidy, is the same as my Case No. 25, taken from Dr. Montgomery's article, ‘On Double Monsters’ (*Dublin Quarterly Jour. of Med. Sci.* vol. xv., 1853, p. 263, pl. 1, fig 2). Dr. M. states, in concluding his account of the case, ‘I may observe that this case is taken by Prof. Vrolik as the type of a class, “Inferior Duplidity,” and the figure of it in my article “Fœtus,” in the Cyclopædia of Anatomy and Physiology, vol. ii., fig. 146, is referred to by him as an illustration.’ In describing the skeleton, he refers to the Catalogue of the Museum of the Royal College of Surgeons of Ireland, vol. i., p. 148. Thus it appears that Dr. Goodell's eighth case will be found in my essay, and is one of the eight cases of four-legged ischiopagous children therein described.

“The non-symmetrical forms of ischiopagus are divided into specific groups according to the development of the pelvic extremities. Those having three

legs, one of which is always a compound limb, resulting from the fusion of two, are described under the title of *Ischiopagus tripus*; of this form I have given details of four cases—viz., 35 to 38.

“Goodell’s fifth case, for which he refers to the works of Ambrose Pare, will be found cited in the N. Y. State Med. Transactions, p. 262, under the head ‘Literature of *Ischoipagus* (A Pare, *Les Œuvres*, Paris, 1575, fol., p. 809). The bibliography of this group, notwithstanding the titles are as much abbreviated as possible, occupies the greater part of this page.

“The sixth case referred to by Dr. Goodell, of which he says a wood-cut is given by Aldrovandus (*Monstrorum Historia*, Bononiæ, 1642, p. 646), is copied from a wood-cut in Lycosthenes (*Prodigiorum ac Ostentorum Chronicon*, &c., Basileæ, 1557, p. 619). It is also copied by Licetus (*De Monstris*, 3d edition, Amsterdam, 1665, p. 113). I have translated a brief account of it, which will be found under Case 38 (p. 254 of Transactions), being one of the four cases with which Dr. G. credits me.

As far as my knowledge extends, the Ohio case is the only one of *Ischiopagus tripus* which have ever occurred on the continent of America, which fact renders it peculiarly interesting.

“There is a form of non-symmetrical *ischiopagus* in which two legs only are developed, both being on the same side of the double body—of course, anatomically. Each individual has one pelvic extremity, the single rectum, urethra, bladder, and genitals being joint stock, each member of the dual corporation having furnished fifty per cent. of the material in the organization of the company. This form I have designated

Ischiopagus dipus, and I have described two cases of it —viz. 39 and 40.

“There is still another form, in which but one individual is fully developed, to the pelvis of which either a pair of legs, or a single fused leg, with double genitals, are attached. This form is denominated Ischiopagus dipygus, of which I have given two cases—one human (Case 41) and one animal (Case 42).

“Since the publication of that part of my essay relating to the generic group Ischiopagus, I have had an opportunity of making a personal inspection of a case of the kind, in a human female infant several months old, born in Millville, Tenn., and exhibited in New York city in 1868. Two well-developed additional lower limbs were attached to the pelvis of the child. Between the natural limb and the supremacy one, on either side, were to be seen well developed female genitals. I saw it urinate from both sides, beginning and ending at the same instant. There was but one anus and one bladder.

“This case has been published in many medical journals, among which I will mention the Richmond and Louisville Medical Journal, July 1868, the Cincinnati Medical Repertory, July 1868, p. 202, and New York Medical Journal, October, 1868, vol. viii. p. 102.

The seventh case of ischiopagus, pointed out by Dr. Stille, has escaped my notice. I have not seen an account of it in any of the numerous works which I have consulted, and therefore cannot feel warranted in placing it with the three-legged group before seeing either a figure or a description of it.

“The case pointed out by Prof. Leidy, in the ‘Pathological Anatomy’ of Rokitansky, may be a mere

typical form, selected from either of the authorities above cited; and since Dr. Goodell says Prof. Rokitansky 'does not state where it occurred,' this would seem the most probable view of the case, corresponding with the Irish case, belonging to the Dublin College, selected by Prof. Vrolik, as a typical form in article 'Double Monsters' in the *Cyclopædia of Anatomy and Physiology*, and which Drs. Leidy and Goodell have both been misled in regarding as an additional case to those described in my work.

"The greatest care is required in all bibliographical and statistical investigations relating to medical subjects, and especially when a period of several centuries is to be explored, in order that the same statement, case, or figure referred to or repeated in different works may not be mistaken for so many different cases. Having had some experience and much perplexity in this sort of work, and on this very subject, for many years past, I have written this note to assist all who are interested in obtaining the correct literature of this form of malformation."

Dr. Ainsworth also furnishes the following account of the fatal illness of the children:—

"While on exhibition in New Jersey, the larger child suffered an attack of cholera infantum, the smaller one remaining in perfect health. At this time the characteristic evacuation from the bowels of the sick child would be followed by a healthy one from the other, who was lively and playful. After recovery, and while on their way to Boston, the small child was taken with the same disease, which continued growing worse for four days, when it died at 2 P. M. At about 8 o'clock on that day, the other, which had appeared well in every respect, began to show signs of

uneasiness, failed rapidly, and died about three hours after the other. While struggling in death, the increased action of the diaphragm seemed to partially resuscitate the dead child, so as to occasion feeble respiration and action of the heart, with opening of the eyes and gasping for breath. This lasted for a few minutes, and ceased at the death of the large child.

About twenty-four hours after death a cast was taken, and the body was injected with a preservative solution by Drs. F. S. Ainsworth and C. B. Porter.

*Autopsy*, thirty-eight hours after death.—Dr. Ainsworth made accurate measurements of every part, but, being obliged to leave, the examination was conducted by Dr. C. Ellis, with the assistance of Drs. C. B. Porter, H. H. A. Beach, and R. H. Fitz. There was *talipes varus* of the right foot. The length of the bodies, from vertex to vertex, was twenty-nine inches. The fused leg measured, from trochanter to malleolus, eight and one-half inches; around the thigh, eight and one-half inches. The leg corresponding with the smallest child, was smaller than the other.

No proper umbilicus was seen, but, in the position of this, was a kind of superficial cicatrix an inch or more in diameter. This appearance was caused by an attack of erysipelatous inflammation of the part soon after birth, followed by sloughing. Both aortas were found in the usual position, and the preservative fluid passed very readily from the aorta of the largest child into all the vessels of the smaller.

The round ligament was in its usual position in each liver, but the vessels soon subdivided, and could not be traced as far as the umbilical region, or, if so,



the branches were exceedingly small, and spread out in a fan-shaped expansion of peritoneum. The lungs were more subdivided than usual, and on the free edges were several auricular appendages. The thoracic organs were, in other respects normal. The livers presented a number of supplementary lobules and fissures, but were of the usual size. The spleens occupied their normal positions in each child, and were, in every respect, normal.

In the small child instead of the layers of peritoneum, which extend downwards to form the anterior layers of the great omentum, there was a fold attached to the large curvature of the stomach, but half an inch broad. In the large child this fold extended to the colon, as is usual, and formed below a free, thin layer, which represented the great omentum. The stomachs were in their usual positions, but both were so affected by cadaveric softening, that they were torn in their removal, though handled with ordinary care.

FIG. 1.

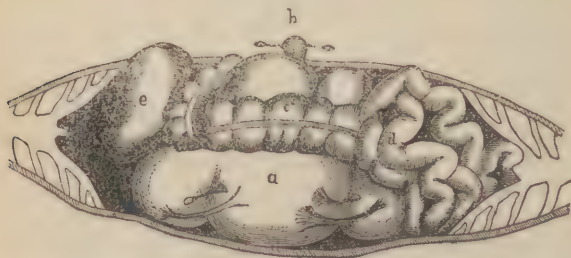


FIG. 1—View of the abdominal cyst, with ovaries and Fallopian tubes attached. *a*, the cyst; *b*, the normally developed uterus and ovaries; *c*, the common large intestine crossing the cyst; *d*, the small intestines; *e*, the stomach; *f*, the liver of one of the children.



The *small intestines* were fused at a point twenty-five inches above the ileo-cæcal valve, that of the smaller child being considerably constricted for a short distance from the junction. The commencement of the fused portion formed a conical sac, with the base and sides an inch and a half in length. The *two mesenteries* of the individual small intestines continued separately over the common portion. The intestine of the larger child measured, from the pylorus to the common portion, thirteen feet three inches; that of the smaller child, seven feet ten inches. There was *one large intestine* twenty-five inches long, apparently the result of the fusion of two, as there were two appendices cæci and four longitudinal bands, each pair terminating in the appendices. Each vermiform appendix had a distinct peritoneal fold.

The *kidneys*, larger than those usually seen in a nine months child, lay upon the side of the common spine, corresponding with the perfect lower extremities. This arrangement gave a left kidney to the larger child, and a right to the smaller, which was also shown by the examination of the organs themselves.

Upon the same side was a well-formed *bladder*, four inches in length and two in breadth; from the fundus of this a urachus extended upwards towards the umbilicus. The *hypogastric arteries* were in their usual position. Behind this was a *uterus*, an inch long and half an inch broad at the fundus, with perfectly normal appendages. Fallopian tubes two inches long. Left ovary one inch; right, three-fourths of an inch in length.

Lying beneath the intestine, and attached to the posterior wall of the abdomen, was a somewhat con-

ical cyst (Fig. 1, *a*, from a drawing made by Dr. R. H. Fitz), with quite an irregular outline, owing to the sacculation of various parts. The broadest portion, towards the fused limbs, filled the space between the cartilages of the ribs, while the opposite side was only two-thirds as large. It weighed, with its contents, 3 lbs. 6 oz. avoird., and contained about two pints of opaque liquid, in which were floating soft, white masses, or flocculi, composed of epithelium. On raising the free portion towards the fused limbs, there were seen two well developed ovaries, three-fourths of an inch in length, attached to the wall of the sac by ovarian ligaments; also two Fallopian tubes.

FIG. 2.

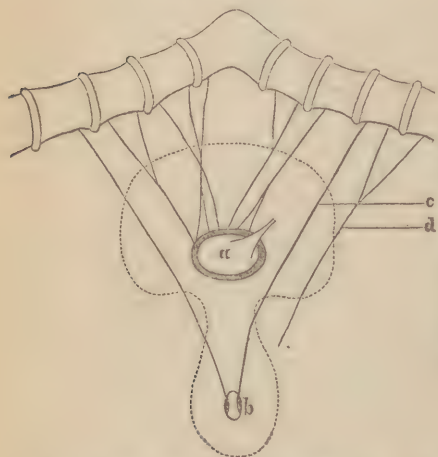


FIG. 2.—Diagram of the rudimentary pelvis and the nerves proceeding to it. *a*, the upper of the two cysts found in the rudimentary pelvic cavity; *b*, the obturator foramina; *c*, the obturator nerve; *d*, the crural nerve.

A careful dissection of the cyst from the tissues which bound it to the posterior wall, showed a sec-

ond cyst (Fig. 2, *a*, and Fig. 3, *b*,) lying in and projecting from a small cavity formed by bones which resembled the ossa innominata of the fused limb. This was connected with the large sac by a firm, white cord, from two-thirds of an inch to an inch in length and half a line in diameter. This gradually tapered towards the upper extremity. In the lower portion there still remained a narrow canal, as was shown by the escape of a drop of clear fluid after incision. The small sac was carefully dissected from the pelvis, with what appeared to be a mass of fat; but after removing the latter a third cyst was found (Fig. 3, *a*), the contents of which could be forced into the second through a very narrow canal. The upper of these cysts was, perhaps, half an inch in length, the lower somewhat larger.

Attached to, or rather imbedded in, the posterior wall of the largest cyst first described, near the crest of the ossa innominata of the fused limb, were two somewhat *oval, reddish bodies*, the largest seven-eighths of an inch in length, the smallest five-eighths.

This series of sacs and the small, firm, reddish nodules resembling nothing in the fully developed body, but probably represented certain organs, the development of which was arrested or in some way perverted. If we revert to the well-developed organs about which there can be no doubt, we find two complete sets of thoracic organs, two livers, two spleens, two stomachs, two small intestines fused below, and one large intestine presenting some features belonging to two; also one complete set of pelvic organs, and on the opposite side two ovaries and two fallopian tubes. To complete the double series, we need two kidneys, a bladder and a uterus. A thorough examination of

these doubtful formations, by Dr. R. H. Fitz, gave the following results :—

FIG. 3.

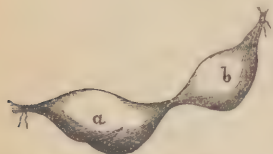


FIG. 3.—View of the cysts found in the rudimentary pelvis. *a*, the lower cyst, containing sebaceous matter; *b*, the upper cyst, filled with clear fluid.

“ On microscopic examination, the two reddish bodies were found to contain straight and convoluted tubules, with Malpighian bodies. No duct could be found connecting these bodies with the cavity of the cyst. The inner surface of the *large sac* was mostly smooth and serous in appearance, with many reticulated fibres visible beneath the surface. Some portions of this were covered with an opaque, white, wrinkled, almost nacreous-looking coat. This was easily detached, friable, and left a smooth surface when raised. This consisted of epithelium, varying in character between the tessellated and moderately cylindrical forms. Projecting from the inner surface was a conical body, about one-fourth of an inch in length and perhaps a line in diameter, terminating in a red, rounded extremity as large as a mustard seed. The base of this corresponded with the terminations of the white cord previously described, which connected this large cyst with the other smaller ones. The surface around it had a peculiar reticulated appearance over an area two inches square. This was due to the presence of a number of pouches, with free circular openings from two to four lines in diameter. On passing a probe into these the parietes were found to extend laterally in the walls of the sac for a considerable distance,

in several instances at least half an inch. In the immediate neighborhood of the open pouches were found three or four yellow patches, rather smaller than the head of a pin. Pressure being applied, a yellow semi-solid substance was set free, which was made up of numerous nuclei of the size of white blood corpuscles, and large cells often of the size of mucous corpuscles. The largest of these, though still containing an apparently normal nucleus, were quite homogeneous and translucent. The nuclei were faintly granular. These were contained in pouches, smaller, but otherwise similar to those previously mentioned. The wall of the large sac contained spindle-shaped muscular elements.

This large sac was probably the bladder, judging from the character of the epithelium, and the presence of muscular elements. The pouches corresponding in position with the racemose glands at the neck of the bladder, were apparently due to retained secretion."

The correctness of the conclusion arrived at by Dr. Fitz, is shown by the following chemical examination of the contents of the cyst, by Dr. E. S. Wood. He says: "The clear fluid was a light straw color. *S. G.* 1.014. *Reaction* acid to test paper. *Sediment* very abundant, dense, white in color, and consisting of epithelium. *Albumen*, was present in considerable amount, the coagulum formed by heat occupying about one-eighth of the bulk of the liquid tested. *Chlorides* and *Phosphates* were present in about the same proportions as in normal urine. *Sulphates* were present in less proportion than in normal urine. Concentrated Sulphuric and Hydrochloric acids produced the same colors as when re-acting upon the

same amount of urine in which *Urophæcin* and *Uroxanthin* are slightly diminished. Well defined crystals of *Uric Acid* were obtained after concentrating the fluid and applying the appropriate tests. These crystals responded to the murexide test. From another portion of the concentrated fluid were obtained crystals *Nitrate of Urea*, after the addition of Nitric Acid. Thus all the constituents of normal urine were present, as well as epithelium in abnormal amount, and albumen."

In regard to the two other cysts, Dr. Fitz makes the following statements.

"The smaller one contained a clear watery fluid. Its inner surface was covered with a delicate tessellated epithelium. The other contained a white opaque semi-solid material, made up of fat epithelium. The wall of this was formed of true skin, which bore numerous delicate hairs half an inch or more in length. By the exercise of considerable pressure the sebaceous material could be forced into the smaller cyst through a narrow canal lying between the two." He concludes, therefore, "that the *smaller* sac is probably the uterus converted into a serous cyst by the retention of its secretion; the sebaceous cyst is probably the vagina, which, genetically, is nothing more than inverted skin."

The result of Dr. Wood's chemical examination is as follows. "The small sac contained about  $\frac{1}{2}$  dram of a clear and colorless fluid, which was slightly acid. Spontaneous evaporation of a portion, left as the only residuum, a number of crystals of Chloride of Sodium. No other substance could be detected by re-agents."

Taking into consideration all the above data, we are justified in saying that there existed representa-



tives of the missing organs, either undeveloped or in some way modified.


The spines were curved as they approached each other, and fused at the first sacral vertebra which was broad and curved. The limb formed by the fusion of two, was attached to the body by muscles only.

Large nerves extended from both spinal columns into the rudimentary pelvis and to other parts. Fig. 2, *b* and *c*.

No more complete examination of the skeleton could be made, as the body was removed.

## NURSE WOMAN.

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OW gentle reader, allow us to say that we should be doing injustice should we say nothing of our efficient and competent *nurse woman*, Mrs. CARRIE ROBINSON. Many can bare testimony to her untiring efforts in administering to the varied wants of this little wonder, and especially so during the sickness of Mina, while in Newark, N. J.; during which time their mother (Mrs. Finley) was in Ohio, visiting her other children, and this faithful (*colored*) woman scarcely closed her eyes in sleep for five or six days and nights. The children were always very much attached to her. There are thousands of persons that will recollect the musical

voice, the bright eye, and lady-like bearing of this intelligent lady, and how they listened with profound silence and wonder while she was explaining the wonders of this strange and wonderful child ; (this she often did in the absence of the author) with ability, grace, ease and entire satisfaction to the audience that would be present. She was always ready and willing to attend the varied wants of the children or child ; and when they were dying, they would look to her as if they expected help from her. She could handle them with more skill and ease than any one—the mother not excepted.

THE CAROLINA TWINS, OR "DOUBLE-  
HEADED GIRL," MILLIE AND CRISSIE.



**T**HE author formed the acquaintance of these interesting and intelligent girls in Pittsburg, Pa., in the year 1871, while they were giving public exhibitions in that city, and

at the same time and place, was exhibiting Minnie and Mina, therefore we had a good opportunity to study their peculiarities. They now (since the death of Minnie and Mina) are the greatest living curiosities in the world. They have two bodies down to the waist, where the two spines unite and blend into one. Each body has two perfect arms and hands, and they have the full and natural use of the same. They also have four perfectly formed legs and feet, on which they move actively, and can waltz or dance and converse fluently with two persons at the same time. The cut will represent their shape better than we can in any other way, as it is taken from a photograph kindly presented to us by them. They are described fully and exactly in the following from the Photographic Review of Medicine and Surgery, by Wm. H. Pancoast, M. D., Demonstrator of Anatomy in the Jefferson Medical College, Surgeon to the Philadelphia Hospital, and Surgeon to Charity Hospital:

SPECIES 1ST.—*Pygopagus symmetros*.

DERIVATION.—*pyge*, the nates, *pago*, I fasten, *syn*, with, *metrein*, to measure.

DEFINITION.—Two individuals more or less complete, separated as low as the pelvis, by the lateral or posterior portions of which they are united; genitals double. In the higher degrees there are two umbilical cords, which are normally attached respectively to

each abdomen. Vital organs independent in the type.

GENUS 1ST.—Pygopagus.

ORDER 1ST.—Terata catadidyma.

DERIVATION.—*teras*, *teratos*, a monster; *kata*, down, *didymos*, a twin.

DEFINITION.—Duplicity, with more or less separation of the cerebro-spinal axis, from above downwards, under the general head of diploteratology or diploterography, the description and diagnosis of special forms of double monsters.

Under this heading, as the proper place in the classification of a compound monster of duplex development, as so admirably set forth in the excellent article by Dr. G. I. Fisher, of Sing Sing, New York, in the Transactions of the State Medical Society of New York, I would report my observations upon the "Carolina Twins," or the "double-headed girl," as they have been called.

This case of pygopagus symmetros came under my professional care, January 18, 1871, while it was on exhibition in this city, in consequence of an abscess forming near the genitals, as stated by Mrs. Smith, who is the guardian of the twins. In the course of their treatment, I was enabled to make the following observations and to have them confirmed by my medical friends whom I had the opportunity of inviting to be present. After great persuasion and with the kind assistance of my friend Dr. F. F. Maury (owing to the modesty of the twins and the natural reluctance of Mrs. Smith), the accompanying photograph of them was taken. They clung to their raiment closely, as may be seen, and it was only by earnest entreaty that they were willing to compromise



by retaining the drapery as photographed. [As it is not proper for this picture to appear in this work, it is not given.] The expression of their countenances shows their displeasure, as their features ordinarily express great amiability of character. This living example of *pygopagus symmetros* is named Millie and Chrissie Smith. They are negresses, twenty years of age, born of slave parents in Columbus county, North Carolina, July 11th, 1851. The parents are still living. The mother is now forty nine years old and the father fifty-five years. They have had fourteen children, the twins being the ninth birth. The mother can assign no cause for the monstrosity, nor did she ever see the Siamese twins. Dr. P. C. Gooch, in *The Stethoscope* of July, 1852, describes the mother as a very stout negress of thirty-two years of age, very fat and of a large frame and pelvis. The children were noted as being remarkably healthy and sprightly, perfectly formed, and united at the sacra. The band of union seems to be chiefly cartilaginous, but the sacra are so closely approximated that some suppose there is osseous union of them. Dr. Gooch further says that when he first saw them "the elder one was in a tranquil sleep, but it was awakened by the action of the bowels of the younger and smaller sister, who was then suffering from diarrhœa. When one has an evacuation of the bowels, they both strain." When I was called to see the twins, I found them very intelligent and agreeable, standing about four feet six inches in height, and so closely united that they were clothed in one dress large enough for them both, with sleeves for the four arms and a silken sash tied around their common waist. The frontal development of each was remark-

ably good, and though their complexion was of the dusky brown of the American negro, and their noses and lips possessed the characteristics of their race, yet the expression of their faces was so amiable and intelligent, and their manners so well bred, that they produced a most pleasing impression upon me. They sing duets and play upon the guitar very pleasantly, their voices being quite melodious. Though joined at the inferior posterior parts of their bodies by the contiguous sacra, and originally formed so as to be placed back to back, yet they have from their birth instinctively twisted themselves, as if the bond of union had yielded, and their spines have assumed a gibbous form under the exertion, permitting them to assume almost a lateral position, like an expanded V, thus facilitating their movements. They walk each partly sideways, the apex of the V advancing, their main support being from the outer limbs, steadied and guided by the weaker inside legs. Their movements are very graceful, and all the curves of their bodies yield harmoniously to their gliding step, as they walk to and fro, run with swiftness, or dance the schottische, polka, or waltz.

They can either walk easily or stand upon the outer limbs, holding up the inside ones, using the outer limbs as in the case of a single individual. In walking and running they rest upon the outer limbs as they simultaneously swing forward the inner ones, and then, standing on the inner ones, swing forward the outer ones. Owing to the obliquity of the junction, the inner limbs are somewhat shorter than the outer ones, and as they move, they step upon the ball and toes of the inner limbs, which adds much to the elasticity of their step. As they stand fronting me,

Millie is on my left hand, and Chrissie on my right. Chrissie is larger and more developed than Millie, who was quite weakly as a child, but is now strong and hearty, owing to the support she has received from her connection with her more robust sister. Chrissie can now, as she has always been able to do, bend over and lift up Millie by the bond of union. This she was in the habit of doing as a part of the exhibition, but as Millie is now so strong and well developed, I advised them to avoid it as a practice, so as not to injure Chrissie's health. Millie, though the weaker physically, has the stronger will, and is the dominating spirit, usually controlling their joint movements, though from long habit one instinctively yields to the other's movements, thus preserving the necessary harmony. Mrs. Smith tells me that when they were little it was somewhat difficult for them to understand this, and individual desires sometimes led to little struggles and quarrels for supremacy. I noticed that what required only the exertions of one to perform, one alone did, as shutting the door or taking something from the mantel or table. But when their single plate was placed upon their dinner-table, then each used both hands to carry the viands to their respective mouths for transmission through each œsophagus to their separate stomachs, with evident satisfaction to each individual. Each brain acts separately, there are two intelligences, as shown by their conversing with each other, and they can carry on independent trains of thought, as is obvious from their talking at the same time with different persons upon different subjects. In consequence of habit, their functions generally work simultaneously. They are usually hungry at the same time, and generally desire

the same food and drink, both drinking a great deal of water. Their habits are very much alike. They generally sleep and wake at nearly the same moment, though one can sleep independently of the other, and sometimes one turns over the other one in bed without awaking her. They defecate and urinate at the same time, though one may have a diarrhœa without the other suffering any pain, or one may be bilious without the other being so, as I found Millie so suffering on one occasion, while Chrissie was not. I ordered Millie a cathartic pill, thinking that she alone required it, but I was told that each had been given one, with the best effect, and I found Millie relieved of her headache.

I believe Millie could be sick at her stomach without Chrissie being so, and *vice versa*. It is reported that one suffered more in teething than the other, and that Millie had the diphtheria, but not Chrissie, and that they both had fever and ague at the same time. Chrissie, on their left, is a little taller, stronger, and more robust than Millie, on their right. As far as can be recognized, there is no transposition of viscera. The hearts are nearly in their respective places, and, allowing for the curvature of their spines, there is but the slightest deviation of the respective apices to the median line. The heart and lung sounds are normal. The individuality of each twin was again shown on examining the pulse. On several occasions, Millie's pulse was found to be from ten to twelve beats quicker than Chrissie's. At one time Millie's pulse was ninety-six beats and Chrissie's eighty-four; on another occasion, Millie's was eighty while Chrissie's was sixty-eight.

The band of union I measured, and found it to be

26 inches in circumference. At five years of age, according to Dr. F. H. Ramsbotham, it was 16 inches in circumference. The distance between the top of the crest of the one ilium to the other, at its greatest breadth on the back, was  $14\frac{1}{2}$  inches. On touching the left leg of Millie, the sensation and number of touches are recognized by Chrissie, but not the spot; and on touching the right leg of Chrissie similar effects are produced.

In company with Dr. J. Murray Barton, I applied an æsthesiometer on the inside of the leg, first of Chrissie, and then of Millie, and found the limit of tactile recognition to be about  $2\frac{1}{2}$  inches. On the 8th of March, 1871, I invited Dr. Wm. Pepper and Dr. R. M. Townsend to accompany me in my visit. We placed the pole of a Faradaic current in the hand of Millie, another on the outside of the outer limb of Chrissie. They both felt it. On placing one pole in Chrissie's left hand, and the other on the external popliteal nerve of Millie's outer leg, the current produced powerful contractions of the peronei muscles of Millie's limb. Chrissie also felt the current in her left arm. When one pole was placed on the external popliteal nerve of Millie's outside leg, and the other pole applied at the same point on Chrissie's outside leg, powerful contractions was simultaneously made by the peronei muscles of both outer limbs. The sensation was recognized from the points of application down to the ends of each one's toes. When the poles were applied to the middle line of the connecting band and the external popliteal nerve of Millie's outer leg, both felt the current, Chrissie feeling the current in Millie's leg, Millie's muscles contracting powerfully.

One pole being applied on each dorsal region, the



current is at once recognized by both. One pole placed over Chrissie's dorsal region, another over the patellar plexus of Millie's outer leg, a current is established that they both feel, and powerful contractions of the muscles of Millie's thigh are produced. We asked, one at a time, to try to lift up the leg or legs of the other, but this neither one could do; each one having complete control, however, over the limbs belonging to her trunk. I applied the point of a lead-pencil to the top of the band of union at the exact middle line, and each recognized the sensation; but removing the point on either side less than an inch, only the one touched recognized the sensation.

It is an interesting feature in this case, that it presents many points of similarity to that of the Hungarian sisters, born October 26, 1701, and that there is no similar case reported reaching adult life for one hundred and seventy years. The Hungarian sisters were similarly united, a symmetrical pygopagus. A description of them is found in the *Philosophical Transactions*, vol. 1, page 311 (Torkos.) Judith, from an attack of paralysis, in her sixth year, was much weaker than Helen. So Millie was much weaker than Chrissie in her childhood, but has increased and grown stronger since.

With the Hungarians one suffered from a slight indisposition independent of the other; it is the same with the Carolina twins. The Hungarians were intelligent; so are the Carolina twins. The Hungarians could not walk side by side; when one went forwards the other went backwards. When one stopped, she raised her sister off from the ground, which Helen often performed, being the stronger. They had no sensibility in common, except in the immediate vi-



cinity of the line of junction. Millie and Chrissie cannot place themselves accurately side by side ; there is a marked obliquity of position, for originally they were placed back to back.

Chrissie, being the stronger, can readily lift up Millie on her back by the band of union. The sensibility is only common at the line of junction, or very near it, and in the two inner lower extremities. The Carolina twins micturate simultaneously, it is reported ; but I believe that the consentaneous micturition and defecation are the result of habit. For in the case of the *Ischiopagus Tripus Asymmetros*, Minnie and Mina, now on exhibition here, aged four months, having a common genitalia and anus, each one defecates separately, as can be seen by the reddening of the face and the straining of the abdominal muscles of one while the other is tranquil. In each case the temperaments are decidedly different, and the mental functions and nervous systems seem to be quite independent. In the case of the Hungarian sisters, one often slept while the other was awake ; they were affected differently by hunger ; one could read and write while the other was asleep. So also is it with the Carolina twins. The osseous union of the Hungarians was from the second vertebral elements of the sacra to the end of the coccyges. The union is similar in the Carolina twins. In the case of the two Hungarians, the aortæ anastomosed inferiorly at the point where the iliaes were given off. The ascending venæ cavæ were connected correspondingly, thus establishing a large and direct communication between the two hearts, producing, of course, a great community of life and functions. So I be-

lieve it to be with the Carolina twins, and in each case there are two separate hearts.

Thus we find a great similarity in the organization, both physical and mental, of these two cases of remarkable twins. The Hungarians lived to the age of twenty-one years, and as in their case it was considered impossible to separate them with safety, so I believe it to be with these (Millie and Chrissie); and as the Carolina twins are united in life, so I believe they will be in death, and that the analogy to the Hungarian sisters will be carried out to the last. The union, arterial and nervous, is so intimate, that if either Millie or Chrissie shall die first, the other will succumb almost at the same moment, either from the impression upon the circulation or upon the nervous system. So was it with the Hungarian sisters. Judith died from an affection of the brain and lungs. Helen, who had previously enjoyed good health, was taken ill with a slight fever, soon after her sister's indisposition, and suddenly sank into a state of collapse, yet preserving her mental faculties; after a short struggle she became the victim of the malady of her sister, both expiring almost at the same moment.

Eccardus (*de Sororibus Gemellis cohærint*, 1709), among other questions in regard to the Hungarian sisters, discusses whether their condition would admit of or justify the solemn rite of matrimony. He answers that physically there are no serious objections, but morally there are insuperable ones, more particularly on account of the extreme liability of propagating monsters. I agree with him, in reference to the Carolina twins, that physically there are no serious objections, but that morally there are insupera-

ble ones ; but I do not believe with him that such marital union would necessarily produce monsters.

The most interesting point in the consideration of these cases of duplex formations is, perhaps, in reference to their embryogeny. Where there is simply an outgrowth of some supernumerary part, or even where there is a secondary body more or less complete, but only one intelligence, the development of the monster might very readily be explained by some one of the various theories that have been suggested by different writers upon Teratology. The most plausible theories are, that these duplex existences are due either to the accidental fusion of two embryos at some early period of their development, or to the existence of a double yolk, or to the proximity and relative position of the neural axes of two more or less complete primitive traces, developed in the vitelline membrane of a single ovum, as suggested by Dr. G. J. Fisher, or to a hypertrophic power or process of budding, or to the fissuration of the cerebro-spinal axis at an early period of foetal life, as suggested by Dr. H. R. Storer. We must first, I think, explain the development of these duplex formations before we can again discuss the question whether the quality of monstrosity be original to the ovum or acquired by it. This discussion was carried on from 1724 to 1743, Messrs. Lemery and Winslow being the principal champions, and was only terminated by the death of Lemery.

A double formation, from the head downwards, or from the coccyx upwards, might be well explained by Dr. H. R. Storer's theory of the fissuration of the cerebro-spinal axis, or by a fissuration of the primi-

tive trace or groove, provided the duplex existence has not two brains or two intelligences. In Frey-ling's case of the two united females (symmetrical pygopagus) born in Carinola, Italy, A. D. 1700, and who died at the age of four months, after being separated, there were two intelligences. On the other hand, in the case of George Washington —, when the supernumerary body was cut from the cheek with the ecraseur by Professor Pancoast, no intelligence died out. George Washington — lived, and is living now. Here was one perfect cerebro-spinal system, in one complete body, united to an incomplete cerebro-spinal system in the imperfect body. The connection of the incomplete body with the complete was such that great fears were entertained lest the child, only seven months old, should succumb to the operation. In assisting in giving ether, I was ordered to cease administering it, lest the child should die; for here there was only one intelligence; there was none in the supernumerary body.

The theory of fissuration, or that of the fusion of two primitive traces, might well account for the development of this case (cephalopagus prosopodidymus), as they explain the hypertrophy, or in a case of a single entity; but they do not seem to account for the existence of two entities, which would appear to involve the idea of two original germs. If the two primitive grooves represent two entities, then how are these two grooves developed? For any doctrine to explain satisfactorily these duplex formations ought to account for the highest as well as the lowest grades of union. Neither of these two theories would explain the development of the Carolina twins, the

Hungarian sisters, the Siamese twins, or the case of Ischiopagus Tripus, Mina and Minnie, or any of the duplex formations possessing two intelligences, unless they can account for the development of the two intelligences. In conversation with the Siamese twins, with the Carolina twins, and in Mina and Minnie, I recognized two distinct intelligences. It is difficult to avoid the conclusion that such cases are due to the development of two entities at the earliest stage of embryogenesis, whether by the ordinary manner of fecundation of the spermatozoa, or by a double-headed spermatozoon, the existence of which Dr. H. R. Storer says was demonstrated to him by Professor Salisbury, of Cleveland, Ohio.

If the bicephalous spermatozoon be proved to exist ordinarily, it would be yet difficult to understand how it could impress the germinal vesicle in a manner to produce these duplex formations, although we know that the sperm cell makes a great impression upon the germinal vesicle. It might, possibly, have as much power in determining the sex and peculiarities of the embryo as the ovum itself, for we know that characteristics of the father are transmitted. But to effect the doubling of the embryo, and the formation of two primitive grooves, it would seem as if it should have the power of splitting the germinal cell in two, or that the germinal cell must possess the power of doubling itself, or that there should be two germinal cells or vesicles to be fecundated.

With the existence of two intelligences there exist, also, two entities, each one, it would seem probable, due to the development of a corresponding germinal vesicle, fecundated at the same time, or one soon after



the other. That two or more ova can be impregnated about the same time in the human female we know, as in the case of twins or triplets. In the inferior animals—those that produce litters—we have several ova fecundated at the same connection, and each is produced perfect, as each ovum is kept separate from the other; but let any two fuse during any stage of their development, and we may have a duplex formation more or less complete. The law of homologous union which controls these duplex organizations, making them of the same sex, joined together at the same parts, bone to bone, organ to organ, blood-vessel to blood-vessel, is no argument against the fusion of two germinal cells; it only exists upon the explanation of this law.

There is no question but that the union of the entities composing these highest duplex organizations has taken place at a very early period of embryonic life. In examining the reports of such cases, not always minutely given, or of double monsters of any variety, there is not a single instance that I know of where there has been found a separate bag of water for each individual composing the double monster, such as is almost always the case, I believe, with ordinary twins. Cazeaux says (p. 866, Tarnier's edition) there are never two envelopes (amniotic) for a double monster. They have been reported with two umbilical cords and two separate placentas, and with a single cord and single umbilicus and single placenta. Admitting the fact that the double monster has but a single chorino and a single amnion, it would seem, if we ventured upon the consideration of its development, to be necessary to consider the form-



ation of these membranes and how there exists but these single ones.

They are found in the ovum itself. The chorion, the most important of the two for us to consider in this relation, and which ultimately does so much to form the placenta, is gradually developed out of the external wall of the fecundated ovum (the vitelline membrane), within which is the vitellus or yolke containing the germinal vesicle (*vesicula germinativa*), and the yolk itself (Bischoff) is converted into a secondary vesicle, the blastodermic membrane, within the substance of which, about the tenth day, appears the rudimentary embryo.

The presence of spermatozoa, singly or in members, has been recognized so frequently in the interior of the ovum (Meissner, Wagner, Heal, Robin,—Cazeaux, Tarnier, p. 122) that, at least, the occasional entrance of a spermatozoon must be allowed even before the ovum may have entirely left its ovarian birth-place. The spermatozoon itself, developed in a cell in the spermatie (semniferous) tubes of the male, is here found to enter again into a cell, the ovum of the female. With its entrance the germinal spot disappears (Bischoff), and the spermantozoon, according to Tarnier, undergoes a retrograde metamorphosis, and is revolved into granulations, which are mingled with the vitellus or yolk. This vitellus or yolk is now, as we may consider, endowed with unusual power; it quickly arranges itself into a granular layer, lining the inner surface of the wall of the cell or elementary chorion, and quickly develops into the germinal membrane, in the substance of which begins the formation of the new being.

Wagner (Cazeaux, Tarnier's edition, p. 92) has sometimes met with two or even more germinal spots in the ova of the mammifera. Though the fact must necessarily be more difficult to detect in the human race, from the less frequent opportunities for examination, there cannot be sufficient grounds for denying the great probability of their existence in woman. If there exists two germinal spots or two germinal vesicles in one ovum (as can be illustrated by drawing two nucleated germinal vesicles, in the ordinary wood-cut, representing an ovum in a Graafian follicle, as figured in the text-book), we can readily admit that the spermatozoa, which enter in numbers, might effect a double conception in a single ovum, even if the existence of a bicephalous spermatozoon be not proved, and that there consequently would be but a single chorion and a single bag of waters. With this condition of development one could also understand that with a single chorion there might be one or two umbilical cords, and a single or double placenta, and yet, further, that the two embryo, formed from two germinal vesicles and developed on the same blastodermic membrane, could be united more or less completely, by a more or less adhesive junction or fusion of the two embryonic primitive grooves.

If we admit the possible fusion of two germinal vesicles, it does not seem improbable, also, that two or more fecundated ova may occasionally so coalesce as to cause a fusion of their membranes, and the union more or less complete of the corresponding primitive grooves. If this prove to be correct, we may then account, possibly, for the least complete union of the highest duplex organization, as in the case of the Siam-

ese Twins, Carolina Twins, Hungarian Twins, or in the closer union of Mina and Minnie, for a double body, with one umbilical cord and one placenta, or having two cords and two placentæ. At the same time, the existence of separate intelligences is recognized and explained, as the result of the fecundation and development of separate germinal vesicles.

For the lowest duplex organizations, with but one intelligence, we have only to admit, that if by the fusion of two germinal cells some one part is diminished, or is wanting in common, that it only requires a greater fusion of them to destroy a greater portion.

## THE SIAMESE TWINS.



ENG AND CHANG.

**C**HANG and ENG were born in a small village on the coast of Siam in the year 1811. Their parents were in moderate circumstances, and got their living by fishing, and the twins

when quite young, made their living by selling shell fish, and followed this occupation until the year 1829, when they were brought to the United States, and exhibited in all of the principal cities until they had accumulated quite a fortune, and then, being tired of traveling, they settled down, and are now (1874) living in North Carolina in the western part of the State, they being sixty-three years old. They are united at the anterior part of the chest, or in other words, the epigastrium of one to that of the other, by a prolongation of a kind of fleshy or ligamentous band about the size of a man's hand, or two inches thick and four inches broad. The whole mass is tough and capable of being considerably extended. These twins form the most remarkable instance of united twins in this respect, that with two bodies individually complete, they have lived to a more advanced age than any other instance of united twins in the records of science. I will here state some of the Physiological facts regarding them. Dr. Jerome Kidder, of New York, has informed the author that he has ascertained by experiment that the right ear of Eng is more acute than his left, and the twins themselves know very well that Chang is much deaf-er than his brother; he does not hear a watch in contact with his right ear. A curious circumstance,

which was noticed at a very early period by the twins, is that the two inner eyes—the left of Eng and the right of Chang—possess a much clearer and more distinct vision than the two outer ; in fact, when the two inner ones are closed, they say they are quite unable to distinguish any object clearly. While you may whisper in the ear of one without the other hearing it, or volatile salts applied to the nostrils of one has no effect on the other, or pinching the arm of one excites no sensation in the other, still, if you stick a pin in the exact vertical center of this connecting link, both will flinch from the pain or hurt. These twins are seldom observed to converse with each other. They play a good game of drafts, make pretty much the same moves and at the same time, and frequently play against each other. They are both married and have large Plantations, and each one quite a large family of grown children. When last heard from one of them was dangerously ill, and surgeons were ready in case of death to separate them.


“ Their mother bore seventeen children, and at one time gave birth to three, and never less than two. But none of these children were deformed.” “ Professor Allen Thompson, of Glasgow, has shown it to be a general law in relation to united twins that the heart, liver, etc., are inverted in position, or in the



*reverse side in one of the two* individuals forming the united twins. This does not hold good in relation to Chang and Eng," or Mina and Minnie, and the author is of the opinion that it is not the case with the Carolina Twins, Millie and Chrissie. Having carefully examined and conversed several times with those wonderful twins, he is sorry that his mind was not drawn to this subject at the time. They are now traveling in Europe, therefore it is not convenient to ascertain that fact at the present time. The probability is that this law did not hold good in the Hungarian sisters. We therefore think that the learned Professor is wrong in his *general law*.

## EARLY YOUTH OF THE SIAMESE TWINS.

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E find in *Lippincott's Magazine* some account of the Siamese Twins while still in the land of their birth, from a lady who visited their former home. Their father, like many of the inhabitants of the land of the White Elephant, was a Chinaman by birth; their mother, also, though born in Siam, was the daughter of a Chinaman, so that the earth of which the twins were formed was three-fourths china clay.

As children they wore the Chinese dress, with their hair *braided* after the fashion of all Chinese boys, and their parents always spoke of them as Chinese. They learned, however, the Siamese language. Though so closely connected together, they were never regarded as one person, but as two.

Chang, being always the larger, stronger and more intelligent, ordinarily took the lead. When one was told anything which the other did not hear, the latter insisted on being informed of it; and if this was refused it led to a quarrel often of some day's duration. Usually the brothers were as much attached to each other inwardly by affection as outwardly by the ligament.

The mother said that at first the ligament that united the boys was so short as to compel them to face each other, nor could they turn in bed without being lifted up, and laid in the desired position; but as they grew and exercised more freely, the ligament gradually lengthened, till they were able to stand side by side, and even back to back, and to turn themselves in bed by rolling one over the other.

The little cottage where the boys passed their childhood was of the sort known in Siam as "floating houses." They are one-story buildings, moored on the river bank, and kept in place, not by anchors, but by large poles on each side driven into the muddy bottom.

They are built either of teak boards or bamboo, roofed with *attap* leaves, and contain three or four rooms, of which the front one is a shop, besides a veranda, which overlooks the river or canal. Here, day by day, as the father plied his trade of catching fish, or cleaned and sorted them for market, and the mother was selling wares in her little shop, the twin brothers amused themselves in the broad, cool verandah, watching their parents, and aiding in such light labors as they were able to undertake.

Sometimes they went fishing in the boat with their

father ; and, like all Eastern children, they soon learned to swim, and spent much of their time in the water. One day, while they were thus engaged, Mr. Robert Hunter, a Scotch merchant residing in Bangkok, passed in his boat, and, attracted by the perfect uniformity of the children's movements, he stopped to ascertain how they managed to keep thus closely side by side.

One can imagine his amazement at the discovery of the cause ; and from that day, which was sometime during the year 1824, Mr. Hunter began concocting measures to get them off to Europe for exhibition.

His efforts were not at first successful, and it was not till five years after, that Capt. Coffin, by giving the parents a large sum of money, induced them to part with their curious offspring.

At the age of eighteen, they were found by a sea Captain from Newburyport, Mass. This Capt. Coffin bought them from their parents, who, as stated before, were very poor people, and taking them on board his ship brought them to this country. Here they excited a great deal of interest. That which seemed to excite the most wonder in the minds of those who saw them, but which was really one of the least wonderful things about them, was that they appeared always to think and act alike. When they were coming over from Siam, the sailors used to play with them and chase them around the ship. One day in running to escape from their pursuers, they

came to an open hatchway. If they had tumbled into the hold of the ship they would probably have been killed. They both leaped at the same instant and landed safely on the other side. Among other things, scientific men tried to decide whether their likeness in thought and action was caused by their being joined together, that is, because they had, as it were, only one body.

The general opinion was that such was not the case, but that their harmony was the result of habit. From infancy they had been obliged to do the same thing at the same time, to think and to act alike, as two most intimate friends. It was always a very interesting question whether either of the twins could continue to live if the connection should be cut. When they were in Europe some years ago, very eminent surgeons were consulted on this point, and they submitted to some experiments intended to settle the question. One of these was tying a cord very tightly around the band that joined them, when they both showed signs of distress, and came very near fainting. From this it was concluded that they could not be separated and live—although a few physicians declared that it would be possible—but all advised that if either should die the band between the living and dead should be severed at once. The twins them-

selves however, secretly determined not to act on this advice. They directed by their wills that they should never be parted, even in death.

It would probably have been impossible for either to live without the companionship of the other, even if there had been a possibility of mere existence when they had been separated. But evidently they had agreed that neither wished to survive the other. It is said to be surprising what these two men could do, in spite of their being held so closely together. They could turn back to back or face to face with but little inconvenience, and one could stand on a stool while the other was on the floor. They were able to do the ordinary work on a farm, and, although so strangely connected, they could perform more than the labor of one man but could not perform the labor of two. They were possessed of a very good degree of intelligence. Even on the passage to this country, they learned to play checkers well enough to defeat some old players. They learned our language, and became good American citizens. Some years ago they united with a Baptist church in North Carolina, and were regarded as consistent church members.

The most remarkable thing about these twins, after all, is that they were able to overcome to so great an extent the restraints which nature had put upon



them. That which made them differ from other men hindered them also in doing what other men do. They succeeded in conquering nature as really as the blind man does when he learns to see with the fingers, or as the dumb child does when he learns to hear with his eyes. They might have been contented to live at ease by showing their peculiarity. They chose instead, to earn a living as other men do. For this they were entitled to credit, and to be remembered with respect by all, as men who, under difficult circumstances, tried to act well their part.

#### THEIR PHRENOLOGICAL LIKENESS.

Professor O. W. Fowler, of New York, says :

The Siamese Twins, Eng and Chang, furnish another striking example of the truth of pre-nological science. It is well known that their traits of character, including their feelings, passions, abilities, dispositions, modes of thinking, of acting, and so forth, are so much alike as frequently to start the pretence, and induce the belief, that they possess but *one mind*, or, at least, that, in consequence of the wonderful, physical connexion of their bodies, there exists between them a similar union of mind, or such a one as to cause both minds to think, feel, and act simultaneously alike. Although it is a mere pretense, yet the foundation of it remained to be developed and explained by phrenology. In the autumn of 1836, at the Washington Hotel, N. Y., their heads were examined by the narrators, O. S. Fowler and S. Kirkham,

when, to their surprise and admiration, they were found to be most wonderfully and strikingly alike, not only in size and general outline, but even in the minute development of nearly all the phrenological organs. Some small difference, indeed, in the development of some few of the organs, does exist; but then it is so slight as to be detected only by the most minute and accurate observation. Among all the heads ever examined by the authors, such an agreement of size, shape, and temperament, or any thing approaching to it, in any two, they never before witnessed or heard of; and hence, the striking coincidence between the characters and dispositions of the two brothers, no longer remains a mystery; for, in addition to the general, natural law, (which operates in this case), that "like causes produce like effects," from the necessity of the case, their training, habits, and education, have been alike, more perfectly so than that of any other two individuals that ever lived. But notwithstanding this, it has been stated, that a slight difference in the development of some few of their organs, was pointed out by the phrenologists, and the consequent difference in their characters, specified. In relation to this point, as well as all the points of agreement, both the young gentlemen and gentleman who accompanied them, fully confirmed and corroborated the statements of the examiners. Again we appeal to our opponents to answer the question. If phrenology is not a true science, how could these nice distinctions and discriminations of difference in character, have been thus accurately pointed out merely by an examination of the physical form of the head? And again: If the disposition and talents of

individuals, depend solely on education or training, how could any difference in these respects, exist between the twins?



## DEATH OF THE SIAMESE TWINS.



ENG SURVIVES CHANG BUT A FEW MINUTES—GRIEF  
OF THEIR WIVES AND DEAF MUTE CHILDREN.



**A** SPECIAL from Richmond makes the announcement of the sudden death of the celebrated Siamese Twins, Saturday morning, the 17th, of January, 1874, at their residence at Mount Aiery, Surry County, N. C.

Chang was partly paralyzed last fall, since which time he had been fretful, very much debilitated, and strongly addicted to drinking liquor as a means of alleviating his sufferings. He had been quite feeble for several days, so much so as to confine the brothers to their bed. On Friday night Chang became worse, and expired suddenly.

About 4 o'clock Saturday morning Eng became so terribly shocked that he raved wildly for awhile. The attack was followed by what seemed to be a

deadly stupor, and in two hours, it is supposed, from the death of Chang Eng breathed his last. The wives and families of the twins are in the deepest grief, the children, many of whom are deaf mutes, express their sorrow in the most pitiful manner.

They were about sixty-three years of age, having been born in Siam in 1811. Their parents were Chinese. They were brought to this country in 1829, and attracted great attention both in America and Europe, which they afterward visited, from the fact that they had been united from their birth by a fleshy band uniting the lower end of their breast bones. They seem at first to have stood face to face, but by constant effort they had become so turned that they could stand nearly side by side. The band, which was two or three inches long and about an inch and a half thick, was covered with skin, and sensitive. If touched in the middle, both felt it. Otherwise the sensitiveness only extended to one nearest the point affected. The twins were usually very affectionate and sympathetic, though they quarreled occasionally. Physicians differed as to the possibility of their being cut apart without destroying their lives. They made a respectable fortune by exhibiting themselves, and settled in North Carolina, where they married two sisters. Each had a numerous offspring. They found it impossible to preserve harmony between the wives; hence they had separate households, each living with his wife for a week alternately.

They lost their slaves, and were otherwise impoverished by the war of the rebellion, and again exhibited themselves. In this city (Cincinnati) they appeared at Mozart Hall, six or seven years ago. The two colored

sisters, known as the "two headed girls," from the fact that their bodies were united, were exhibited at the same time. At this time the twins were gray haired, and their yellow mongrel skin was dry and withered. Several of their children accompanied them. Chang, whose constitution had become broken by disease, and intemperance, died first, after a brief illness. Eng, on learning his brother's fate, became violently excited, and expired in about two hours. How much mental sympathy and how much physical causes had to do with Eng's death does not yet appear. It is to be regretted that surgical aid was not at hand to effect a prompt separation of the living and the dead.

#### THE DEAD SIAMESE TWINS.

The death of the Siamese twins in Mount Aillery, near Salisbury, N. C., on the 17th of this month, ended one of the most remarkable of natural phenomena. They came to this country in 1829, when they were 18 years old, having previously been shown in Europe. They were born on the coast of Siam, and their parents lived by fishing. None of their fifteen brothers and sisters were deformed, although many of them were twins. They made the tour of the United States, and, except Tom Thumb, were the greatest objects of wonderment to the people. Nor was the curiosity regarding them confined to gaping ruralists. To many men of science they were the first specimen of joined and living human beings. The fleshy ligature which linked them was about a foot in length, two inches broad, and four thick, and through it ran a large artery and many veins, making

their circulation identical. Their breathing, too, was simultaneous when they were asleep. They were not so entirely one, however, but that each had an entirely separate existence. Their senses were totally disconnected. One could not feel a hurt inflicted on the other, the ligature being the only part in which they were sensitive in common. Much scientific discussion arose concerning them, mainly bearing upon the question of possible separation.

#### THEIR LIFE IN NEW YORK.

Barnum got the twins in 1850, and for several years they were shown in his old museum. At that time they spoke English very imperfectly. They were below the medium size, and when in health their weight together was 210 lbs. Chang was larger than Eng, and looked several years younger. He was, too, the mental superior of his brother, although both were ignorant, and had intelligence that scarcely rose above low cunning. Their faces were peculiarly repelling, yellow in hue, and closely resembling those of the Chinese cigar sellers of Chatham street. Chang was the most robust and good natured. Eng was often sick, and always morose and peevish. They had a sleeping room in the museum, as did the other curiosities, and one night a rumpus was heard in it. On breaking open the door, the twins were found fighting. Eng was on the floor underneath Chang, who was choking him. As a rule, however, Chang was more forbearing than the irritable disposition of his brother warranted. They played checkers together sometimes, and took lessons in English with slow results. Their pay was \$100 a week, which they equitably divided and put into savings banks. They nev-



er visited their home, and seemed to have no care for their family. When Eng was sick Chang nursed him ; but perhaps did so from selfish motives, as the serious illness of one made it necessary for the well one also to go to bed. Chang had something of an appreciative vein of fun, and liked to give senseless answers, in his broken English, to the numberless questions of visitors. They remained with Barnum until 1855, and it is believed that they had then saved about \$40,000 each. Growing tired of show life, they decided to settle down in a warmer part of the United States.

## A DOUBLE WEDDING.

In their travels they had been in North Carolina, and its climate had pleased them. So they bought two plantations, and secured wives to complete their domestic establishment. Here they took the surname of Bunker. They were then bachelors of forty-four. They married English sisters, aged twenty-six and twenty-eight. The girls had been servants, and it is said that a Lancashire dialect still clings to them. The making of the double match involved much trouble, for although the twins were not unduly exacting, it was hard to find women who were both willing and at all desirable. There was no love-making before the engagement, the courting was done by proxy and correspondence, and the ladies had seen their future husbands only at a show in London when they accepted the offer of marriage. The twins based their choice upon likenesses forwarded by their agent, who gave assurances of the respectability of the girls. All having been arranged they were brought to Amer-

ica, the twins paying their expenses, and the marriage was solemnized quietly in Salisbury. The wives were not beautiful, but were strong, healthy English working girls. The domestic lives of the couples were peculiar. Each family had its own house, servants, and domestic establishment. Their plantations were owned and managed separately, although in matters of consequence Chang was usually the master. The wives lived entirely at their respective homes, and the husbands alternated—staying one week at Chang's house and the next week at Eng's. Each looked after his plantation and other business during the weeks of living at his own place, and the visiting brother was not supposed to interfere. The wives did not agree very well, and the strangely tied families quarreled so seriously that the sisters frequently had periods of complete estrangement, lasting for weeks at a time.

Although Chang and Eng were rich, they did not live happily. Mrs. Chang had the first child and it was a deaf mute. The families increased rapidly until Chang had six children and Eng five. Of these children four never heard nor spoke, although in all other respects all were strong and not deformed. Eight are living, the oldest, a daughter of seventeen, having lately been married to the lessee of a neighboring plantation. About eight years ago Chang became converted in a religious revival, and Eng also embracing the belief, they joined the Baptist Church. They were regular in their attendance thereafter, and retained their standing as good Christians. Their tempers, however, were not improved by the spiritual change, and before the emancipation their slaves

were the most whipped of any in the region. The rebellion freed their slaves and otherwise seriously impaired their wealth. To repair their losses they again exhibited themselves through the country, and at Wood's Museum in this city; but they were only moderately successful, owing partly to a rapacity which prevented managers from having anything to do with them. A greater curiosity in their line had sprung up, too, in the two-headed girl—two negro children from South Carolina—who are joined at the hips, and who are on exhibition in Paris. Chang and Eng had grown uglier as they had grown older, the latter especially being wrinkled, thin, and bent. Their tempers were soured, and they quarreled with each other constantly. They had gained greatly in intelligence, however, and were more sensitive to the gaze of the crowd. At the Revere House, where they boarded, they received a few visitors, to whom they complained of the necessity which had driven them back into show life. They also retained strong secession proclivities. During their absence their wives managed the plantations. Those of the children who were not deaf mutes were sent to school, and are now well educated. Before their last exhibition here the twins had been again in Europe.

## A CERTAINTY OF UNION IN DEATH.

The cause of their moroseness as they grew older is believed to have been the probability of the fatal effect of one's death upon the other. The idea of separating them by a surgical operation had been often broached, but physicians had generally agreed that it would kill them. Therefore each was haunted

with a dread of being left bound to his dead brother, with almost a certainty of dying under any attempt to sever him from the corpse. While in Paris and London they consulted the most eminent surgeons. One experiment, however, dashed all hope of separate existence. The ligature was compressed until all circulation of blood between them was stopped. Eng soon fainted, and a removal of the compression was necessary to prevent death. This proved that neither could sustain a separate circulation of the blood, and to have cut the ligature would have killed both. With this knowledge they returned to their homes and lived as they had done before. Later the health of Eng grew worse, and Chang was frequently obliged, although well himself, to keep to his bed with his sick brother. But about a year ago Chang suffered a paralytic stroke, from which time his health was the worse of the two. He took to drink as a relief from suffering, and the lives of the twins grew wretched indeed.

The details of their death are meagre. Chang died first, and a few moments afterward, Eng, who had for a few days been well, became delirious and raved wildly. This may have resulted from the mental shock and apprehension as to his own fate: but more likely it was the result of a cessation of blood circulation between him and his brother. A stupor followed, and he died two hours afterward.—*N. Y. Sun*, January 20th, 1874.

Dr. J. Hollingsworth, the family physician of the Siamese Twins, gives the following account of their death :

"Of late years, owing originally to an estrangement between the wives, arising out of some partiality in matters of dress and jewelry, they have kept up separate establishments or farms two miles apart. It was their unvarying custom to spend three days and a half of each week in each house. So unalterable was this custom that the funeral of a son on one occasion and the wedding of a daughter on another could not be attended by them because the ceremony was not at the right house.

"Thursday, January 15, was the day for Chang to visit Eng's house. The former was the weaker of the two, having been paralyzed three years before on the right side, and ever since suffering from chronic pneumonia. On this night the extreme cold, the rough road and an open carriage conduced to throwing Chang into a severe attack of his affection of the throat, and he sent word to his wife next day that, though better, he thought he would have died that night.

"On Friday night the twins slept in the second story of the house, having no one in the room but a little negro, who said they got up after midnight and sat around the fire, Chang complaining very much of his throat. Eng wanted to go back to bed, but Chang said it hurt his breast too much to lie down. However, they did soon afterwards go to bed, and nothing more was heard till toward daybreak, when Eng was heard crying out for his son William, who slept in an upper room.

"When the family was aroused, after repeated callings from Eng, they found Chang dead, and Eng with the cold perspiration starting out from his face, pallid,

and complaining of excessive cold in his feet, and asking them to pull and rub them. However, in about  $1\frac{1}{2}$  hours after the alarm, Eng expired, all the symptoms of coming death being present."

The family wished to hear from some of the absent sons of the twins before giving permission for an autopsy, but Dr. Hollingsworth dissuaded them from an immediate burial and had the bodies placed in a strong wooden box encased in tin and surrounded with charcoal, and deposited the whole in the cellar of the dwelling-house, where the cold weather will preserve the bodies at least two weeks.



FROM NORTH CAROLINA—MEDICAL OPINIONS  
CONCERNING THE SIAMESE TWINS—BODIES FOR  
SALE—\$10,000 ASKED FOR THE PRIVILEGE OF  
A POST MORTEM EXAMINATION.

NEW YORK, January 25th, 1874.

A dispatch from Mount Airy, N. C., says Doctor Wm. Hollingsworth, who attended the Siamese twins, is of the opinion that the death of Eng was not caused by any vital connection or artery passing from one to the other through the ligament that united them, and believes there was no such vital connection through the ligament, because he has attended the twins when one was sick and the other in good health, and when there was as much as twenty beats difference to the minute in their pulsation.



The bodies, after being embalmed, were placed in a coffin, and encased in a larger tin box, which was soldered and made air tight. All was then put in a large wooden box and packed in charcoal and made secure and placed in the cellar of the house. It is reported that the bodies will be disposed of at an enormous price to some museum or medical college, or placed on exhibition. This is to be subject to a decision of the members of the family. The charge is made that a veil of mystery has been thrown over the death of the twins, and the real cause of the disease suppressed for the purpose of obtaining the above stated object.

A dispatch from Greensboro says that Dr. Jos. E. Hollingsworth, brother of the Doctor who attended the twins, while en route for the North, stated that his mission was to dispose of the dead bodies of the twins on the most favorable terms he could negotiate. The sum asked for the privilege of a post mortem examination is stated to be eight to ten thousand.

**THE SIAMESE TWINS EN FAMILLE.**—A writer in the Philadelphia Press, speaking of the Siamese Twins, says :

Much speculation has always been rife as to how the twins courted, and finally became joined in the bonds of Hymen. It happened that they were traveling through the South, and stopped at the town of Traphill, in Wilkes county, N. C. The country in the locality being very romantic, and the land good, the twins determined to settle, and accordingly engaged in business in the village, being excellent traders, and their novel condition soon at-

tracted many persons to them ; among them a farmer named Yates, who lived in the immediate neighborhood, and who was possessed of two bouncing daughters. Chang and Eng looked upon these women tenderly, and evinced great affection for them, and, like ordinary young folks, made numerous calls at the residence of their bewitchers, and there being a pair of them all around, a match was soon made, and the four were two (or one). \*These wives always displayed great affection for their liege lords, and manifested the usual jealousies common to the human family. From this double union there were some twenty-two children born. Mrs. Chang presented her husband with some nine or ten, and of these but two were boys, while in the Eng family the daughters were proportionally outnumbered.

The offspring, contrary to the general opinion and preceding statements, with few exceptions, were healthy, robust children. Great difficulty arose when the time for conferring names upon the young Changs and Engs came. They could not all take their paternal and maternal relatives' titles, and they had no Christian names. The difficulty was surmounted, however, and the appellations of Christopher Columbus, Patrick Henry, Stephen Decatur, Nancy Bunker, and names of a like sort were given to the retinue of little ones. The fathers seemed anxious that all their immediate descendents should be well educated, and purchased a house in the town of Mount Airy, shortly after their removal to that place, where the larger children lived and attended

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\*This conflicts with the above statement, which we consider correct.

the school in the district. They were all apt scholars, and seemed to inherit a fair amount of natural acuteness from their fathers."

LETTER FROM A DOCTOR WHO WAS WITH THE  
SIAMESE TWINS FIVE YEARS.

I read with deep interest in the Herald of Sunday (the 25th) the partial account from your reporter at Mount Airy, N. C. He observes that "the feeling of regret was markedly observable in the tone and manner in which every one, even the negroes, spoke of the dead twins. For twenty-seven years they had been residents of the county, were familiar and intimate with nearly every citizen of it, were universally beloved and respected, and, owing to their well known hospitality and liberal spirit, their loss is just now as universally regretted."

Your correspondent is very correct, and there are thousands of families in various parts of the United States and in Europe who hold the twins equally dear in their memories, and who have been shocked at reading the grossly libellous and lying articles which have been published in some of our papers since their death. The twins were by no means "half idiotic," "uncouth" and "brutal" in their habits or natures, as has been said by some of these—(well, I won't say what I think they are)—but they were naturally gentle, amiable and kind; they had tempers, and when some thoughtless fool would insult them they would show pretty plainly that they knew how to resent the insult.

They were not "ignorant" nor "unintellectual." It is true they never were what is called educated, but their natural good sense taught them early that

they had much to learn. And I doubt not that your reporter will inform you that in their library he found well-used copies of the works of Scott, Byron, Cooper, Dickens, and more than one edition of Shakespeare. And few persons in our cities have kept themselves as well posted on the public affairs of this and foreign countries as did the twins.

Even in naming their children they exhibited a better knowledge of noted people than have most persons with large opportunities. I can only recall from memory the names of a few of their children—James Madison, Stephen Decatur, Christopher Wren, Josephine, Albert and Victoria. The latter is a deaf mute, who has been well educated at Raleigh, and was recently married to a gentleman who is also a mute. All their children who are old enough have been well instructed. This does not look as if the parents were “boors” or “half idiotic.”

After a not very short experience with human nature, I can truly say, that I never met any man whom I believed to be as positively honest, truthful, full of the true courage of a gentleman, and strictly scrupulous in all his dealings as I found the twins to be.

In another column of your Sunday Herald appears a letter signed by “T. M. De Hylton, M. D., No. 218 East Thirty-eighth street.” This expert (?) proves conclusively, to his own satisfaction at least, that it would have been as easy to have “cut those men apart,” without any more danger, than it would have been to have amputated a finger, and that “if the physicians in attendance at the time of death severed the ligature the life of the other would have been preserved.”

Excuse the bad English. It is the Doctor's, not

mine. And then there was no physician "in attendance at the time of death."

It has been my good fortune to have enjoyed the society of and free converse with Sir Astley Cooper, Sir Anthony Carlisle, Sir Benj. Brodie; Drs. Warren, of Boston; Physic, of Philadelphia; Magruder, of Washington, and many others whose names are known to some members of the profession. All those gentlemen examined the twins with great curiosity and care—not once, but very many times—and not one of them ever expressed a belief that it was quite possible to separate the twins without endangering the lives of both. But, unfortunately for those gentlemen and the cause of science, they went to their premature graves without having known or heard of T. M. De Hylton, M. D., No 218 East Thirty-eighth street, city of New York.


I became acquainted with the twins the day after they arrived in the United States, when they could only speak a very few words of our language. It was I who taught them to speak and to write it. I was absent from them very little, day or night, for about five years after they landed in America, in 1829, and it is only fair to suppose that I am somewhat familiar with the matters upon which I have written.

After having studied them very closely for about a year, I had the honor of stating at a meeting of the Royal Society in London in 1830 "that I did not believe it was possible that one could live two hours after the death of his brother." I was right.

Respectfully yours,  
JAS. W. HALE,  
No. 69 Wall street, New York.

## PHYSIOLOGY OF THE SIAMESE TWINS.

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 R. HOLINGSWORTH, of North Carolina, who examined the bodies of the Siamese twins at the time of their decease, found the band which connected them to be an extension of the sternum for about four inches in length and two in breadth. The band was convex above and in front, and concave underneath. The two bodies had but one navel, which was in the center of the band, and it is supposed that there were two umbilical cords branching from this, one extending into each body. The connecting link was found to be the ensiform cartilage, which was as hard as bone, and did not yield in the least. (It may be here mentioned that for some time previous to their death, no motions were observable in the band.) The doctor said



he did not think they would have survived a separation, not from the fact of being afraid of separating the arteries, but from fear of producing peritonitis. No hemorrhage would have been produced, so far as could be seen, as there were no arterial connections of any account.

#### REMOVAL OF CHANG AND ENG TO PHILADELPHIA FOR DISSECTION—THE WIDOWS WILLING.

The Scientific Medical Commission, consisting of Dr. William H. Pancoast, of Jefferson Medical College; Dr. Harrison Allen of the University of Pennsylvania, and Dr. T. H. Andrews, also of Jefferson Medical College, as assistant, deputed by the institutions it represents to make an autopsy of the bodies of the deceased Siamese Twins, arrived at Mount Airy on Saturday afternoon last, after a most fatiguing journey by day and night over the worst roads that a mountainous and rugged country ever presented. There they were received by a deputation of citizens on the part of the town and families of the twins, consisting of Dr. William Hollingsworth, Colonel R. T. Gilmer and Mr. Frederick Graves, the first being the late medical attendant of the twins, and the latter gentlemen the agents and lawyers of their families.

#### A VISIT TO MRS. ENG.

After a private consultation as to the nature of their mission, the visiting medical gentlemen were promised every facility on the part of the committee of reception, and it was agreed that on the following day (Sunday) they should be escorted to the home of Mrs. Eng Bunker, where the twins were temporarily in-

terred. In accordance with this programme, about 11 o'clock the next day the commission, attended by the committee, drove to the residence of Mrs. Eng, which is situated some four miles from Mount Airy, in a southwesterly direction. On the way they passed the residence of Chang's family, which is only three miles distant, and soon afterwards they halted at the comfortable log structure of Mrs. Eng. The news of the arrival of the commission having spread with electric speed, a large number of people from the surrounding country came pouring in on horseback and in buggies, and soon quite a crowd were assembled, all of them anxious and interested spectators of the scenes they were about to witness.

The members of the commission were then formally introduced to the widows of the late twins, both of them impressing the commission as very proper, dignified and respectable women. In a brief interview which then took place, and which was participated in only by the widows, the commission and the lawyers and medical attendant of the families, the members of the commission delicately and deferentially set forth the object of their visit and urged the importance to science of an examination of the bodies.

After a brief discussion, during which both the ladies evinced considerable feeling, they consented to the proposition of the commission, on the condition and with the distinct understanding that the bodies should not be injuriously mutilated. This the commission agreed to in a few moments. Afterwards they descended to the cellar where the bodies were interred. This was found to be a dark but somewhat spacious apartment, the floor of which was the naked earth, the soil above the substrata of rock being of a

porous and mouldy nature. Accompanying the commission was a tinner to open the case in which the bodies had been placed. The scene now was quite a weird and solemn one. The temporary sepulcher was reached by a northwestern door from another basement apartment, and when the commission descended the crowd of neighbors thronged in and stood silently around the improvised tomb of the twins. The darkness being intense, pine wood knots were then lighted in one corner, the flickering glare of which cast ghostly shadows of the spectators athwart the wooden ceiling and along the roughly built granite walls of the room.

In the midst of a deep silence, and with great solemnity, the earth was then removed from around the outer wooden case, which was lifted from its position and conveyed to the apartment without. Here the outside case was then taken off, the charcoal removed and the tin case presented itself to the view. Proceeding in order, the tinner then opened the latter, and the inside coffin was exposed. With great care this was then carried to one of the rooms of the house up stairs where a full and excellent light was obtained, and after being placed in a proper position the cover was taken off. All the members of the commission and several others present bent eagerly over the coffin, the first sensation they experienced being a cadaverous odor, which, however, was not at all repulsive. A white gauze muslin covering being drawn off, the faces of the dead twins were exposed.

The features of Chang were partially discolored, those of Eng being natural. Both the bodies were habited in neat black suits, the coffin was nicely lined with muslin, and, from the indications so far, they

seemed to be in a very good state of preservation. Both the widows then came into the room, each going to the side of the coffin upon which lay the remains of her husband; and with a mournful sadness that was very touching, they took a final farewell, and left them to the doctors. This last tribute elicited from those present expressions of respect and sympathy for the sorrowing ladies.

The members of the commission, assisted by those present, then disrobed the bodies and a partial examination was made, no operation being performed, and the result of this was followed by a medical consultation. From what I could glean, it was found the bodies, though very well preserved so far, would in a few days be in a state of decomposition, and that the surgical operation, if performed now, might endanger the ultimate preservation of the now defunct natural curiosity, a consequence which both the commission and the families were anxious to avoid. It was further decided that the facilities for an autopsy were so meagre and insufficient that it would not be wise to attempt it on the present occasion, and that, besides the present examination and efforts to obtain good photographic views of the ligament and bodies, the operations of the commission would be limited to a partial embalment to insure the preservation of the bodies. A number of efforts to obtain photographic views were then made, resulting successfully in one instance only. After which the partial embalment was performed and the bodies were once more covered in the coffin.

While the photographic artists were busily engaged with their instruments trying to obtain negatives of the dead twins, the commission had another inter-

view with the widows, when a regular agreement, the nature of which was not divulged, was duly signed by both parties. The commission at that time represented the present impossibility of making the desired examination, the ladies, after some persuasion, consenting to the removal of the bodies to the College of Physicians at Philadelphia. Soon after this the coffin was again securely fastened, replaced in the tin case, soldered air tight and placed in a wagon for transportation to Mount Airy. A lunch, of which the commission and all others present partook, was set by the widows, after which the doctors departed with their precious anatomical charge. On the way a stoppage was made at the house of Mrs. Chang Bunker, in order to obtain the consent of one of that lady's daughters to the removal of the bodies. This was finally very reluctantly given, as that young lady was opposed from the beginning to the whole proceeding.


The commission returned to Mount Airy late Sunday evening. On Monday they left for Salem, in Forsyth county, in a carriage, the wagon containing the coffin following, and behind two buggies with the photographers, the whole making

#### QUITE A FUNERAL PROCESSION,

which attracted the attention of the people all along the route. On Tuesday afternoon the cortege reached Salem, where the bodies were shipped to Greensboro, the commission accompanying them. They arrived at that point this morning and left for Philadelphia this afternoon, where they will arrive to-morrow at half past one o'clock.—*N. Y. Herald, Feb. 4, 1874.*

## OFFICIAL REPORT OF THE AUTOPSY OF THE SIAMESE TWINS.

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HE following official report of the special meeting of the College of Physicians of Philadelphia, held on Wednesday evening, appears in the Philadelphia Medical Times :

A special meeting of the College of Physicians of Philadelphia was held at the hall Wednesday evening, February 18, 1874, for the purpose of hearing the report of the Commission on Siamese Twins, Dr. W. S. W. Ruschenberger, United States Navy, in the chair.

The bodies of the Siamese Twins being upon the table, the meeting proceeded to hear the report of Drs. Pancoast and Allen. On behalf of the commission Dr. Pancoast stated that the dissection not having been entirely completed, their report would be a verbal one, to be followed at some later day by a me-



moir upon the subject. He further remarked that it had been agreed that he should consider chiefly the surgical aspect of the matter in hand, while to his colleague had been assigned the demonstration of the anatomical peculiarities.

Dr. Wm. H. Pancoast said :

MR. CHAIRMAN AND FELLOWS OF THE COLLEGE:—Having been requested, as a member of the Commission, to open the discussion this evening, I will say briefly, in reference to this monster of symmetrical duplex development, joined, as many of the Fellows now know, at the ensiform appendix, and also here at the omphalos or navel, that at the investigation which we made on the first occasion at Mount Airy I made the opening incision of the body on the line for the ligation of the primitive iliac, on the right side ; Dr. Allen made the incision on the left. The object was to reach the great vessels—the aorta and two primitive iliacs—and to force the injecting material which we use for embalming (chloride of zinc) up the aorta and down the iliacs until it ran from the incisions made in the fingers and toes. It flowed freely through the blood-vessels of Eng, owing to the ossified condition of his arteries ; the injection in Chang was, however, not so successful, owing to decomposition in the tissues and blood-vessels. It was necessary to repeat the injecting process several times in order to preserve the body. The arteries of Chang were found to be very much decomposed—quite rotten, in fact.

In Dunglison's Medical Dictionary we find the scientific name given for the Siamese Twins, in the classification of teratology, to be *Xiphopages* ; and by

referring to the admirable article on "Diploteratology," of Dr. D. J. Fisher, (published in the transactions of the Medical Society of the State of New York for the year 1866,) it will be found that the twins belong to the class of *Anacatadidyma*. In his classification of double monsters he makes three orders :

ORDER 1ST—*Teratacatadidyma* ; derived from *teras teratos*, a monster ; *xata*, down, and *didumos*, a twin.

DEFINITION—Duplicity, with more or less separation, of the cerebro-spinal axis, from above downward.

ORDER 2ND—*Terata-ana-didyma*, derived from *ana*, up or above, and *didumos*, a twin.

DEFINITION—Duplicity, with more or less separation, of the cerebro-spinal axis, from below upward, or from the caudal toward the cephalic extremity of the neural axis.

ORDER 3D—*Terata-anacatadidyma*, derived from *ana*, above ; *xata*. down ; and *didumos*, a twin.

DEFINITION—Duplicity, with more or less separation, of both the cephalic and the caudal extremity of the cerebro spinal axis, existing contemporaneously. In this order the monster now before us might be called an *Omphelojagus Niphodidymus*.

Thus we have the scientific nomenclature of this monster. Of course the consideration of greatest interest to the profession, and one of the main reasons why the Commission made such exertions to obtain the *post mortem*, was that the American profession might not be charged with having neglected an effort to obtain an autopsy, which would solve the mystery of their union. The feature of greatest interest is connected with the band—about four inches long and

eight inches in circumference. In addition to this, there are other points of importance in teratology, in regard to the fulfillment of the law of homologous union, in relation to the juncture of the recti muscles, and the fasciæ of the obliquus and transversalis at their point of meeting in the center of the band. In regard to the position of the hearts, we think their apices present toward each other; but we have not yet opened the thorax. The livers we have found to approximate to each other and to push through the respective peritoneal openings into the band. We extended our incisions to the margin of the band in front. By placing my hand in the peritoneal cavity of Eng, and my colleague placing his hand in the peritoneal cavity of Chang, we pushed before us processes of peritoneum, which ran on to the median line of the band; and we could feel our fingers in the lower portion of the band, behind the median line, with a distinct layer of peritoneum between them, demonstrating at once the prolongation of the peritoneum into the band, and the complete separation of one peritoneal cavity from the other at this median line. Above that we felt some traces of vascular connection, apparently running from one liver to the other; but this we will examine into when we have a better opportunity of carefully dissecting and examining what vascular structures may exist. We also noticed that in turning off the flaps, consisting of the anterior walls of the abdomen, the hypogastric arteries, as illustrated by the diagram on the blackboard, ran upward in each body into the band. We lost them in this way, as we think, toward the common umbilicus in the anterior inferior surface of the middle of the band.

It is possible that the two hypogastric arteries on each side passed through this umbilicus. Whether or not there were two umbilical veins, we have not been able to decide, nor to answer the question whether the umbilical cord was double or single, and composed of the four hypogastric arteries and two umbilical veins, or whether the placenta was single, double or twin.

We also recognized that the ensiform appendix, as shown in the diagram of each side, was prolonged and united in the middle line. On our later examination we find that there is complete continuity of structure of the cartilages, but no true joint at the middle line, although it is possible there may be some small synovial sacs further up. The motion is mainly due, as I here demonstrate to you by moving these bodies one upon the other, to the elasticity of the connected ensiform appendices and intervening fibro-cartilages.

In regard to the vascular connection of the band, we have not yet been able to make so thorough and careful an examination as we wished; but still, in throwing colored plaster into the portal circulation of Chang, it has been found to flow through the vessels of the upper part of the band into the portal vessels of Eng. So that the surgical anatomy of the band consists in the skin and facia which cover it, the two separate peritoneal pouches which meet in the middle, the large peritoneal pouch, the vascular connection, to whatever extent that may exist between the two portal circulations, and the remains of the hypogastric arteries in the lower portion of the band. Thus the main difficulty in any operation for the section of the band would seem to be in regard to the peritoneal

processes and the portal circulation. The anastomosis which may exist between the internal mammary arteries and the intercostals in the integument in the upper portion of the band, of course would present no difficulty.

I would not venture upon any further remarks as to the surgery of the case, while there are so many distinguished gentlemen present more competent than myself to give an opinion. At the same time, operations on the peritoneum may not be considered so hazardous in this day, when ovariectomy, gastrotomy, and even Cæsarian section are so often performed. The peritoneum pouches themselves would not present so great a difficulty as might be anticipated, under pressure and acupuncture, by which the sensitiveness of the structure might be so altered as to permit of a section. I was informed at Mount Airy that in Paris a surgeon had made the experiment of applying pressure upon the band, and it was reported the twins had fainted in consequence. I could not ascertain, however, whether this was from fright, design, or actual pain.

As Dr. Hollingworth is present, it may be proper for me to mention a fact which that gentleman can corroborate, that Eng was the stronger physically and Chang was the stronger mentally. The same difference was observable in their characters. Chang was more irritable than Eng, especially since an attack of paralysis with which he had been afflicted—this being in the side next to Eng. The latter had not only to bear with the irritability of his associate, but also to support one-half his weight. Among other peculiarities, Chang would sometimes break useful articles, or throw them in the fire.

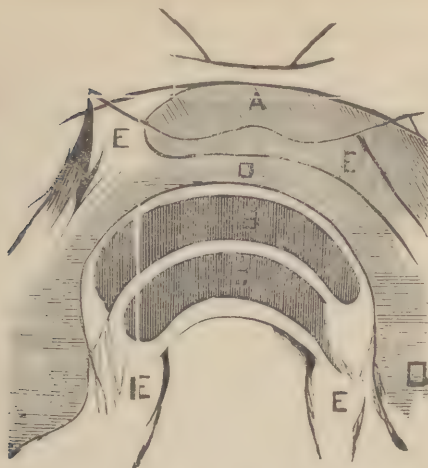
In conclusion, let me say that when I turned up the skin and superficial fascia of the H incision on the posterior part of the band, I was struck with the development and the strength of the abdominal aponeuroses. The fibers arched, interlaced, and developed into a strong, fibrous band about a quarter of an inch wide, running around the median line, although there was no actual joint in the cartilage.

Professor Harrison Allen said :

MR. CHAIRMAN—I will probably best discharge the duty devolving upon me by at once proceeding to a somewhat more minute anatomical description than Dr. Pancoast has given, this being in accordance with the understanding between us in reference to the evening's exercises.

Perhaps it would be best to point to that simple diagram upon the blackboard, before considering the subject more fully in detail. As Dr. Pancoast has informed the Fellows, there is a union of the twins at the two ensiform cartilages, which are very firmly joined in the center, Eng's process being the more robust of the two. You will observe that there is a point of conjunction between the two processes which is not quite in the median line of the band. In the center of the band is seen an elliptical space which suggests the presence of a synovial cavity, with fibro-cartilage. It is probable that the ensiform junction is of the character of a synchondrosis, with a median bursa-like sac ; neither ensiform cartilage is ossified.





ENG. CHANG.  
 DIAGRAMMATIC REPRESENTATION OF THE BAND.

A, upper or hepatic pouch of Chang.

E, E, dotted line, union of the ensiform cartilages.

D, connecting liver band, or the "tract of portal continuity."

B, the peritoneal pouch of Eng.

C, the lower peritoneal pouch of Chang.

E, E, lower border of the band.

Below this point, in the diagram, you see a number of differently-lined tracks. The lower one, (C,) immediately above the umbilicus, is only separated from the skin by a very delicate layer of tissue (so that, with the finger introduced into the pouch, and moved, there is a decided indication of motion in the skin) on the under surface (E, E,) of the band.

This pouch passes across the band from the abdomen of Chang, and is lost in the duplicature of the suspensory ligament of the liver of Eng. The finger

passed upward to the band from the abdomen of Eng crosses the band above the pouch just mentioned, and is lost between the layers of the suspensory ligament of the liver of Chang. When the significance of the round ligament at the free border of the suspensory ligament is remembered, the relations of these pouches directly suggested that they have had essential bearings to the umbilical vein of the funis, and might be provisionally termed the umbilical pouches.

Above Eng's pouch, (B.) and between it and the under surface of the ensiform conjunction, is a second pouch, (A.) prolonged from Chang's abdomen, which fairly reaches the peritoneal cavity of Eng, but is not continuous with it. Extending up into this pouch from Chang's abdomen is a process which suggested to the commission the possibility of the transit of hepatic vessels. This view was rendered more probable from the fact that a similar process passed up into the band from the liver of Eng. Accordingly, the plaster injection, colored by ultra-marine, was thrown into a tributary of the portal vein of Chang, when it was observed that the fluid passed freely into the liver of Eng, as well as into some of the mesenteric veins proper. It is my own hypothesis that this bond of union (D) was the true hepatic tract; but in its present state, in the absence of evidence of any parenchymatous admixture about the vessels thus crossing the band, we prefer to denominate the transit as the tract of portal continuity.

In the foetal condition it is very likely that this large space (A), the upper pouch, now continuous with the abdomen of Chang only, was entirely occupied by true liver-tissue, which, as maturity was attained, became smaller, and left an empty space.—

Hence I propose to call this upper pouch the *hepatic pouch*. The contraction chanced to be greater on Chang's side, in harmony, it may be, with other evidences of a weaker and less developed type, which is so apparent in many of the tissues of Chang. Now, with reference to the demonstration. As Dr. Pancoast has already informed you, the incisions in the abdomen were made in rather an exceptional manner. By reference to the parts, it will be seen that the incision in either individual was located in such a way as to avoid the median line, since it was supposed, from the peculiar position of the umbilicus, that the remains of the hypogastric arteries would be found extending from the fundus of the bladder upward and onward along the entire length of the anterior wall of the abdomen. Besides, this decision would enable us, by continuing from below upward, to fairly open the abdomen and examine the cord, without violating the conditions by which the commission was bound. The flap comprises the greater part of the abdomen wall, and can be best observed, from the position of the bodies on the table, in that of Eng.

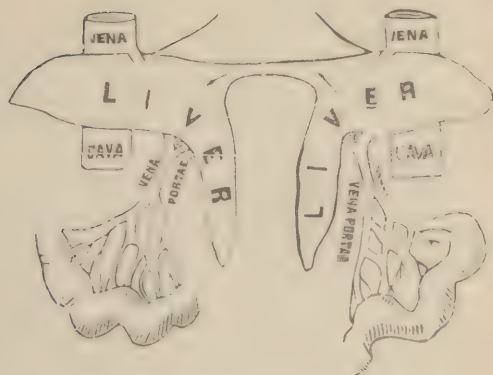
You notice that the tissues are well supplied with fat ; and this condition is very plainly in contrast with that of Chang. Eng's side of the band is well nourished ; Chang's end of the band presents an entirely different aspect. Chang was an invalid, and the weaker half of this organism, with less strength in the abdominal wall, and in every way less tissue, than was possessed by Eng. You can mark that distinction very plainly in the two halves of the band, proving, if we had no other means of proof, that there could not be any very intimate communication of the vessels between the two.

The first point worthy of notice is that of an isolated mass of adipose tissue, evidently sub-peritoneal, which is the position of the usual umbilicus, namely, in the median line of the abdomen, about half way up the anterior wall. This is strictly symmetrical, a similar point of about the same size being found in Chang.

Another fact equally well pronounced is that in Chang the bladder was found very much contracted and contained no urine ; it was deep down in the cavity of the true pelvis. That of Eng, however, was distended with urine ; hence there was a contrast in the appearance of the fold underneath the skin in the two individuals, in consequence of the great difference in the actual size of the bladder.

My finger is now in the umbilical pouch of Chang. (C.) The motion is noticeable in the under surface of the band. On the side of Eng no such motion will be observed. I can very clearly see my finger passing between the two folds of the suspensory ligament. At this point it would perhaps be well to exhibit the drawings which have been made of the views which we have been able to obtain from this very limited incision. On looking up toward the band with the greatest possible stretch of tissue, we see the arrangement of the remains of the hypogastric arteries converging toward the bond of union. In this lower diagram we show you the livers joined by what is supposed to be the tract of portal continuity. You will observe the limits are somewhat symmetrical. Here is the liver of Chang, with a fore-shortened right lobe :

## ENG. Hepatic view. CHANG.



DIAGRAMMATIC REPRESENTATION OF THE LIVERS.  
 PORTRAYING THE RELATIONS OF THE VESSELS,  
 &C.

The arrows show the direction in which the injection passed from Chang to Eng.

The remainder of the right lobe is deep within the abdomen, and of course it has not been seen. Here is the fundus of the gall bladder, and there the suspensory ligament, carrying the remains of the umbilical vein. When the finger is passed from Chang into Eng, it is received between the folds of the suspensory ligament of Eng. In Eng the parts are essentially the same, although you see more evidence of adipose tissue. Here is a little ligament aiding in the support of the liver, to whose convexity it is attached; it is not seen in Chang at all. You might term it an accessory suspensory ligament. When the

finger is introduced there, it is observed to terminate blindly, showing, we think, that this is no more than an adventitious pouch, due to the presence of that suspensory ligament.

We find some vessels in the portal system, even as far down as the mesentery, well filled with the blue coloring matter. We of course desired, as far as possible, to examine all the tissues here by these incisions; hence it was that when the bodies were in this position, the skin was taken off from the wall in order to get a view of the linea alba.

[The bodies were here inspected by the audience, and afterward turned so as to expose the posterior part of the band. Further remarks apply to this posterior aspect.]

Dr. Pancoast—While the bodies are being turned I will take the opportunity of replying to one or two questions which have been asked me. First in regard to the common sensibility of these individuals. According to the statements we received at Mount Airy there was a line of common sensibility corresponding to the median line of the band. Dr. Hollingsworth says that if a pin was stuck into the band at the median line, both of the twins would feel it distinctly; but that even at a slight distance to either side, the point of the pin produced an effect only on the twin of that side.

Another question has been asked me as to whether either of them was ever put separately under the influence of an anæsthetic. I answer it by saying that so far as we know it never was attempted, but that when, upon the final occasion, Chang was anesthetized by death, Eng was for a time unaffected. The story, as told at Mount Airy, was that Eng waked up and



asked his son. "How is your Uncle Chang?" The boy said: "Uncle Chang is cold. Uncle Chang is dead." Then great excitement took place. Eng commenced crying out immediately, saying to his wife, whom they called in, "My last hour is come," and finally sank away. He was in perfect health when they went to bed.

They had been sitting up in a large double chair made for their accommodation. Eng was smoking his pipe until he became sleepy, and finally said to Chang, "We must retire." Chang said that he could not lie down comfortably. I understand that when they went from Chang's house to Eng's house, where they died, it was against the direction of Dr. Hollingsworth; but, with their usual stubbornness, they persisted in riding the distance in an open buggy. To return to the narrative of the night of their death, after Chang had refused to lie down, they walked about the house for some time, and even went out to the porch and washed their hands and drank some water. It was about one o'clock when they went to bed. Then Chang died, sometime between that and morning, his death not producing any immediate impression on Eng. It was only when the latter woke up and inquired about the condition of his brother, that he was at all affected.

As to the question "What caused Eng's death?" I am not able to tell. The *post mortem* which has been made does not show the condition of his lungs. Probably the valves of his heart were in a disorganized condition, and probably also the shock upon that weakened organ caused death.

Dr. Allen—In my opinion Chang died of a cerebral clot. From inquiry at his home, I was led to believe that the lung symptoms were not due to pneumonia; indeed, were not severe enough to have been so caused. The suddenness of the death, the general atheroma of the arteries, and the fact that there had been previously an attack of cerebral paralysis, all indicated that the death was of cerebral origin. Eng probably died of fright, as the distended bladder seemed to point to a profound emotional disturbance of the nervous system, the mind remaining clear until stupor came on—a stupor which was probably syncopeal. One thing to be settled in the making of our examination was to get the bodies in the best possible condition, so that we could judge of the true nature of the band.

You will observe the great contrast between the anterior appearance of the band and its posterior aspect. When we suspended them face to face we conceived we had them in the proper position for study. On the posterior side there was a fold underneath the skin extending from the ensiform cartilage of Chang, passing over, crossing the median line, and inserted into the ensiform cartilage of the opposite twin, Eng. It was one of the objects of the examination to determine what was the nature of this fold. I judge it to be the *linea alba*; but I leave the Fellows to decide that for themselves. I will also add that, because we had not the privilege of cutting the anterior portion of the band, we were obliged to cut down from the point of which I have spoken to get to the structure, and demonstrate these *culs-de-sac* from behind.

Here (referring to the casts) from this point the incision is horizontal about midway, and joined laterally by two oblique lines which were directed one upward and the other downward and outward, making a modified letter H incision. Thus we got all the space we needed. When I raise the skin we see the umbilicus of the superficial fascia; and on lifting the other flap we get a better general demonstration.

And now we come upon the point of interest, namely, the position of the band and its true nature. We have a diagram here. You notice on Chang's side that there is an arrangement of interlacing aponeurotic fibers, marked here; and these fibers, starting in Chang, pass across the median line and are inserted in the ensiform cartilage of Eng. Turning the lower flap downward, the upper flap upward, and the two lateral tongues outward, the superficial fascia is exposed. This is abundantly supplied with adipose tissue on either side, but is free from fat where it covered the band. Both the lower flap and the fascia are lost in the scar marking the position of the umbilicus. The same dissection exhibits the position of the lower pouch of Chang. Turning down the external oblique, the two recti, and the internal oblique muscles, the transversalis was exposed, the latter forming a very well defined layer in Eng, with an interval between the ensiform cartilage and the inferior margin of the thorax. These were much less marked in Chang.

Turning forward this layer of fibers in Eng from without inward, the diaphragm is brought into view. Muscular fibers are conspicuous in this position. The peritoneum on either side is now fairly exposed. Incisions may now be made with a view of demonstra-

ting the pouches of the band. The upper pouch of Chang is, you will observe, freely opened on its posterior aspect, and the vessels in the tract of portal continuity are seen to be well distended with the injecting fluid. A small artery is seen crossing beneath this tract of veins, and is probably a branch of the hepatic ; but, whatever may be its origin, it evidently could have little effect in influencing the nutrition of parts beyond the band, and is probably retained within the band itself. The lower pouch of Chang reveals nothing which was not demonstrable from in front, and the same may be said of the single pouch of Eng ; thus confirming our opinions of the construction of the band before the pouches had been opened from behind.

Dr. Abraham Jacobi, of New York, being called upon, said : I am very much obliged to the gentleman who has mentioned my name. I do not believe, Mr. Chairman, that I have anything to add to the stock of knowledge in regard to the subject before us. If I were to answer the question as to how this monstrosity originated, especially whether they became connected after having been separate organisms, I should say that that idea has been given up by those whose opinions are entitled to weight. It is true that years ago such specimens were spoken of by Dalton, in Holland ; and a number of others have alluded to the idea that two such individuals might in embryonic life become united simply by adhesion, the result of their being located together in the embryo. In truth, it appears to me that at that period such a thing might be possible ; but, of course, the union would be a superficial one, not involving the deep organs.

We know that the first epidermis is formed at the end of the fifth week of embryonic life, and that after a time, it is thrown off, so that the embryo of about seven or eight weeks is more loosely covered with the real epidermis than in the earlier period. The epidermis is thrown off a number of times until about the fourth month of utero-gestation, when it is finally perfected and remains intact. Now it is suggested that at those times when the epidermis is thrown off, the connection takes place between the two individuals, just as the connection takes place between the prepuce and glans, which we so often find adherent in the fœtus and in a number of newborn children.

There are evidences which we can not forget, that such connections have taken place before the final epidermis is formed, and about the time one of the earlier coverings is being thrown off, at a period when the internal organs, frequently implicated in such monstrosities, are already formed. There are few double monstrosities so well developed as this one. I think the records of about four hundred monsters have now been collected in the books and journals: but very few are of such a complete nature as this. Every one has heard of the Hungarian Twins, who lived to the age of twenty-one years, in the last century. Another pair of female twins, that traveled in Germany about two years ago, were described at the time in the *Berliner Wochenschrift*. They were of a similar nature. There are two cases on record in which a division has been successfully attempted, but in those cases the connections were not so well developed as in the Siamese Twins. The connection was in the same neighborhood, but only superficial—of skin

and subcutaneous tissue. One of these cases is recorded by Dr. Braun (*Virchow's Archiv.*) Fortunately, or unfortunately, I do not know which, they were his own children. They were of the female sex. He separated them immediately after birth. One lived three and a half days, and when the case was described 1866, the other was five years old. In that instance the connection—three and a half inches long—extended from the ensiform process to the umbilicus. The other case is described as early as 1689, by the old German author, Kernoch.

As far as the origin of twin monsters is concerned, I am certainly of those who are not of the opinion that two individuals could get into such an intimate connection by growing together. Certainly the connection is an original one. I believe that the general opinion is now that one Graafian vesicle may have two ova, or one ovum have two nuclei; and these finally may, like the two vitelli of an egg, be closed together, surrounded by the same material, forming a single complete ovum; and thus it may be that the two are included in the same ovum. I think that this will also explain why the sex is always the same—why they are always both male or both female. They are male in twenty or twenty-five per cent of the cases.

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FROM DR. PANCOAST'S FINAL REPORT ON THE  
AUTOPSY—THE GREAT MYSTERY SOLVED.

PHILADELPHIA, Feb. 20, 1874.

The last point of interest to the public in relation to the Siamese Twins is now apparently settled. It is the question which relates to their hearts, toward



the solution of which the medical gentlemen have been slowly and tediously approaching, and which finds no place in the official document. The report in the *N. Y. Herald* of Thursday anticipated by just twenty-four hours the official statement of the physicians, which made its first appearance to-day. The peculiar abnormality of the livers, the union of the two in fetal life, the strange manner in which an injection forced within the mesenteric vein of the one passed into the mesenteric vein of the other, the interior structure of the connecting link, the position of the two pouches or sacs, evident reflection of the peritoneal membrane, and the fact that there existed between the two but a common umbilical cord, along with the nature of the cartilaginous attachment from the sternum of the one to the sternum of the other, were all fully and accurately described in a preceding portion of this work.

#### THE HEARTS OF THE TWINS.

There is nothing remaining now to investigate save the peculiar position of the hearts. The livers of the twain were upon opposite sides and laid in close connection. By the natural law of homologous union the positions of the hearts are the same. Their apexes incline towards each other, but, unlike the livers, they could never have been the same, or, of course both would have died in the same hour. The heart of Eng is upon the right side, and the heart of Chang is upon the left; hence that of one is strangely and abnormally placed. Fluid injected into the heart of one failed to find its way to the heart of the other, as was the case when the livers, located near the bond of union, were operated upon. This is the last fact which establishes the individuality of each.

In life their sympathies, passions, emotions, inclinations and personal habits were decidedly and sadly estranged, and this circumstance alone, without any keen anatomical scrutiny, would have shown the individuality of their heart and brain. Two individuals brought from different extremes of the world could have passed through the number of years allotted the twins with less disagreement and conflict than these two incongruous, unsympathetic children, forced constantly to bear each other's burdens and complaints.

#### THE DEAD BODIES TO BE PUBLICLY EXHIBITED.

There is no further use of denying what has already been indirectly hinted at—namely, that from the time the twins passed from under the knife they became the common property of the country and the world. When the last curious scrutiny of science shall have been satisfied, and when one scans no more the columns of the daily papers to learn the mysterious secrets of their union, the two, in public halls and theatres, will be exposed to view, and as the living journeyed from place to place, so will the dead hither and thither be freighted. The strict and stringent contract with the family indicates this, and every stage of the autopsy has been carried on with such intent. The sympathetic and somewhat cultured disposition of the eldest daughter shudders and revolts at this, and the voices of their children cry out loudly against it; but the wives of the twain, urged on, it appears, by a few individuals for the sake of gain, seem to be determined, and once again the Siamese Twins will appear to the world, not as living, breathing souls—a strange freak of nature—but as dull and stark corpses.

## THE HUNGARIAN SISTERS—HELEN AND JUDITH.

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**T**HESE wonderful girls were born in the year 1701 and lived until 1723, being in their twenty-second year when they died at Presburg. "They had two distinct bodies conjoined at their *ossa sacra or coccyges*. Their backs, therefore, being in proximity, they could not walk side by side; when one went forward the other went backward; when one stooped she raised the other off from the ground; this Helen often performed, being the stronger of the two. The *osseous union* was from the second vertebral elements of the sacrum to the end of the coccyges. The aortal anastomosed inferiorly at the point where the iliaes were given off. The ascending vena cavae were connected correspondingly, thus establishing a large and direct communication between the two hearts, producing, of course, a great community of life and functions. They had two separate hearts, the union, both arterial and nervous,

being so intimate that they died about the same time. They had no sensibility in common, except in the immediate vicinity of the line of junction. One would often sleep while the other was awake. They were affected differently by hunger, thirst, fear, anger, &c. One could read or write while the other was asleep. They were highly accomplished, were fine singers, and conversed fluently in several languages, and were publicly exhibited in England, as well as most of the cities of Europe. Their temperaments were entirely different, and their mental functions and nervous systems quite independent. Judith died from an affection of the brain and lungs. Helen, who had previously enjoyed good health, was taken ill with a slight fever soon after her sister's indisposition, and suddenly sank into a state of collapse, yet preserving her mental faculties. After a short struggle she became the victim of the malady of her sister, both expiring almost in the same moment. (The history of all double persons is that the death of one is immediately followed by the death of the other.) Some diseases they had separately; others, as small-pox or measles, together. Helen preserved her mind and speech entire until the death struggle set in. This lasted only a few moments, when their two souls passed from their united body to the God that gave them."

## JOSEPHINE MYRTLE C——.



**T**HIS singular little being was born the 12th of May, 1868, in Lincoln county, Tennessee. The following description was taken from the *Richmond and Louisville Medical Journal* :

Josephine Myrtle C—— is possessed of one head and one trunk, like those of a living, well developed, healthy, active infant of about five weeks, (June 16, 1868.) while the lower part of her body is divided into the members of two distinct individuals. Pro-

fessor Joseph Jones, M. D., and Paul F. Eve, M. D., (University of Nashville) who examined this child, declare their belief that the lower parts of the spinal column is divided or cleft, and that there are two pelvic arches supporting the four limbs which are situated upon the same plane, and from which part below all the organs are double, there being two pelvic arches, four legs, and in every respect fully duplicated, as the more particular description by the above named professors fully corroborate, but which it is not necessary to give here. The engraving of this interesting child was taken from a photograph, and through the kindness of Dr. Jerome Kadder, M. D., of New York, (author of "Vital Resources," &c.) the author is under many obligations for the above description, and likewise to his courtesy for the opportunity of using this plate, and publishing other extracts from his valuable work.




TWO HEADED CHILD OF SARDINIA.




RITA CHRISTINA.

He who stems a stream with sand,  
And fetters flame with flaxen band,  
Has yet a harder task to do  
That with success divides us two.

 HIS wonderful child was born in Sardinia in the year 1829, lived eighteen months, and is described by Dr. De Michaelis, Professor of Surgery in the Royal University of Sassari. Was well known in Europe, and accurately described in this country years ago by Prof. Megs. In this wonderful instance there were two heads, two necks, four arms, but only two legs. From the umbilicus down there was one well formed child, but above this all the organs were double ; in reality there existed two beings. The rectum and bladder were common to both, but all else in the trunk was double and distinct. One would sleep while the other played, etc., for they had two spinal marrows, two brains, two hearts, but the last two occupied a common *pericardium*. Unfortunately, after surviving a little over a year, one sickened and died, when the other, then in health, instantly expired.


## TWO - HEADED CHILD OF ZERBST.

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HE Medical and Surgical Reporter, of July 3d, 1869, No. 1 of Vol. 21, page 23, presents the following: A female child with two heads was born a few days ago at Zerbst. A careful examination has shown that the spinal column is divided into two at the first of the true vertebræ, and that from this point *two perfectly* developed necks and heads proceed; the breast is half as broad again as is usual; the limbs simple and well formed. We have not yet heard in how far the internal construction of the breasts are simple or complex. Dr. Kidder says that such cases "should not be called *monsters*, if that term conveys any meaning at all repulsive to the most æsthetic choice of genial thought." We fully concur in the Doctor's opinion, and believe that it is but the exception if at all, and not the rule, that these cases are in the least repulsive, but on the contrary are beautiful and attractive in their strange being; at least we know this to be the case with the Carolina Twins, Millie-Chrissie, or Mina and Minnie.

## DOUBLE WOMAN.

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VER a century ago a double woman was exhibited in all of the large cities of Europe, and her portrait illustrates the pages of the *London Gentleman's Magazine* of that period. Thus far the author has been unable to ascertain the exact formation of this wonderful instance of double humanity, but we are of the opinion from what we learn, that there were two heads, two necks, and four arms, but only two legs, one pelvis, and one set of pelvis organs.

"In nature there's no blemish but in mind,  
None can be called deformed but the unkind;  
Virtue is beauty; but the beauteous evil  
Are empty trunks, o'erflourished by the devil."

## SCOTCH DOUBLE MAN.


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**T**HE *Reum Scotarum Historia* gives the following account of a Scotch double man, which is strikingly similar to the famous Morrow county double child in some respects :

“During the reign of James III. of Scotland, and at his Court, there lived a man double above the waist and single below that region. The King caused him to be carefully brought up. He rapidly acquired a knowledge of music ; the two heads learned several languages ; they debated together, and the two halves occasionally fought. They lived generally, however, in the greatest harmony. When the lower part of the body was tickled the two individuals felt it together, but when, on the other hand, one of the upper individuals was touched, he alone felt the effect. This monstrous being died at the age of twenty-eight years. One of the bodies died several days before the other.”

## TWO HEADED CHILD OF EMMAUS.


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FROM the commentaries of Sigbert we are told of a child born at Emmaus, in the reign of Emperor Theodosius, simple below the chest or chests, with four arms and two heads. The two heads were no better than one, for they were differently affected. One might be crying while the other laughed; one frequently would be feeding, the other sleeping; sometimes they quarreled, and there was a fight of the two pairs of arms. This child is said to have lived two years, one part dying four days before the other. It was killed by the decay of its inseparable neighbor.



## THE MILANESE GIRL.


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 ARDEN tells us of a Milanese girl with two heads, and in all other respects single, except that she was found after death to have two stomachs.

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## TWO HEADED WOMAN OF BAVARIA.

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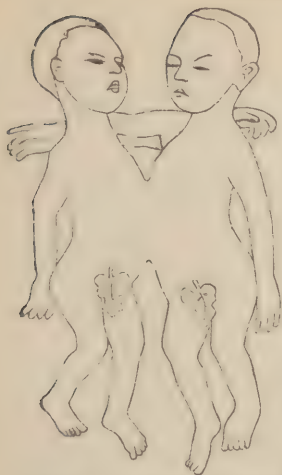
 MONG the two headed women was one in Bavaria, aged twenty-six, of whose two faces one was pretty, the other ugly.

## THE KENTUCKY TWINS.

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E quote the following from Dr. Jerome Kidder's work, "Vital Resources":

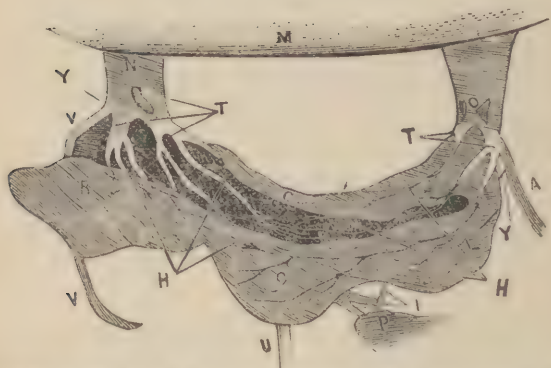
The following case of united twins, is one of what Geoffrey St. Hilaire calls *autositaries*; two individuals equally developed, and having life in common. They are shown in outline in the following cut:



Reported in the Richmond and Louisville *Medical Journal*, by Prof. A. B. Cook, A. M., M. D., Professor of Surgery in the Kentucky School of Medicine; presented to him by E. C. Bright, M. D., of Eminence, Kentucky. These twins were born March 29th, 1865. Their mother was a mulatto, aged twenty-eight years at their birth.

"The connecting band extends from the xiphoid cartilages downwards to a point where the natural umbilicus should be; the skin is continuous on each surface with the corresponding abdominal walls, natural in appearance and without any trace of a median line or raphe between them. The band measures in its vertical diameter 4 inches; transverse at the sternal border  $1\frac{1}{2}$  inches; at the umbilical border 2 inches; thickness through the lower half  $\frac{1}{4}$  of an inch; upper half 1 inch. There is but one common umbilical cord, which enters at the centre of the inferior border of the band, thus forming one single umbilicus for two beings; it is natural in size and appearance, and is composed of one common umbilical vein and four hypogastric arteries with the usual envelopes."

These infants died at birth, and a dissection revealed



This cut shows the double liver of this interesting case. R, right; L, left; C C, centre of the upper surface; H H, hepatic veins converging and coalescing toward either extremity; T T, trunks of the hepatic veins; V, right vena cava ascendens; N, the common venous trunk of the right; A, left vena cava ascendens; A, left vena cava ascendens uniting with the left hepatic veins to form the common trunk O; P, small section of liver detached to show hepatic veins at I; U, umbilical vein; Y Y, ductus venosus of each side; M, common diaphragm, showing the openings for the cavas, N and O.

that the peritoneum (lining membrane of abdomen), formed one great continuous sac, which accommodated itself to the separate abdominal walls and viscera of each, and a single liver common to both. This viscus occupies an anomalous position; the greater part of the organ is suspended across the upper half of the cavity in the connecting band, the extremities terminating in the right hypo-chondrium of each.

“The parenchymatous structure is analogous to other livers, with this difference: that in this common organ we find no trace of any septum denoting an original development in two parts, and we have two sets of hepatic vessels having a promiscuous distribution, from which common reservoir they distribute to two distinct individuals. In utero they were supplied with maternal blood through one common channel, the umbilical vein; and nourished and developed from one common source, the placental blood, which flowed through one common organ before general distribution. We have, in this abnormal development, an irregular substance suspended in the septum, carrying the life-blood of two human beings. It is covered by peritoneum; the vertical line of its under-surface is occupied by the trunk of the umbilical vein; on either side two gall bladders, two cystic ducts, two hepatic ducts; further removed from the common mesian plane, and nearer the center of the under-surface, two shallow fissures, each giving exit to biliary ducts and deep lymphatics distributed to two separate alimentary canals and thoracic ducts, each transmitting a hepatic artery, vena portæ and hepatic nerves to nourish, support and feed a chemical laboratory, which distributes alike its invigorating or baneful fluids to two living beings.

“The office of this liver might be compared to that of a filter, placed in a recess common to two households, and from either extremity pouring out to the occupants a constant stream of pure invigorating fluid, or distributing the germs of sickness and death.

“The physiological questions may be very briefly considered in two relations: first, through the common liver, and second, through the connecting soft tissues. In the liver terminate the peripheral extremities of a portion of the two great nervous systems; the cerebro-spinal axes, connecting its animal sympathies with the cerebrums through some filaments derived from the pneumogastric and right phrenic nerves. The ganglionic systems connecting intimately and inseparably, the organic functions through the hepatic plexuses derived from the solar plexuses of two beings. We have in the nerves, a union of sympathy and organic function. The complicated structure of the organ fits it for its great function, the distillation of the bile, a constant secretion in greater or less quantities; and constantly delivered from this common source to two digestive apparatuses.

“This fluid, complex in its chemical composition, is not a mere excretion as some maintain; but it is a necessity to nutrition and life, as proved by experiments on dogs, in which death soon followed the absence of bile in the intestinal canal. Two lymphatic systems also act their part in the hidden mysteries which govern the laws of health. In short, this single organ performs all the important physiological functions connected with the liver for two individuals.



"The physiological union through the soft tissues of the connecting band are of minor importance, being limited to the capillary inosculations of the sanguineous and lymphatic systems, and the intermingling of the sensor and motor nerves for a short distance on either side of median line. The healthy relations of the two then are common, derived from the same fountain head and disturbed by the same causes.

"In their pathological relations any symptomatic disease of the liver, whether functional or organic, would necessarily affect both alike. Functional disorders of any of the duplicated organs, as the brain, lungs, heart, etc., of one would not disturb necessarily the health of the other twin. Local inflammations in one, as pneumonia, nephritis, dysentery, etc., would not be developed in the corresponding organs of the other, but he would only suffer from the symptomatic fever communicated through the circulation. Idiopathic disease, as typhoid fever, and zymotic disease, as small-pox, rubeola, poison, etc., would affect both simultaneously through the vascular and lymphatic connections. The administration of all remedies, acting through the systemic circulation, would influence both alike in consequence of the two capillary anastomoses—first, and most important, in the liver; and second, in the connecting band."

## DOUBLE CHILD.

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BY T. H. TANNER, M. D.

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**T**HROUGH the courtesy of Dr. Jerome Kidder, of New York, we also are permitted to make extracts of the several following strange cases, noted in his very interesting work, "Vital Resources." In his argument, *Plurality of Personality*, he says that "T. H. Tanner, M. D., in *Obstetrical Transactions*, Vol. II., reports a case of united twins, female, still-born. The attachment extended from the top of the thorax down to where the natural umbilicus should be. The *thoracic cavity was common, containing two lungs, one heart, and one sternum*, (breast-bone). The abdominal cavity was common, having one liver, one spleen, two kidneys, and one set of intestines, one single cord and placenta."

## DOUBLE CHILD.

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BY J. G. SWAYNE, M. D.

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ROM Dr. Kidder's work, reported by J. G. Swayne, M. D., in *Obstetrical Transactions*, Vol. II., sex, male. The union extends from the umbilicus to the top of the thorax. There was one sternum and four clavicles, one thoracic cavity with a pericardium, containing two separate perfect hearts, one venous connection through a large branch connecting the right vena innominati of one, with the left vena innominati of the other.

In the abdomen there was a single diaphragm, one common liver, one umbilical cord having one vein and four arteries. All the other organs in both cavities were duplicated.

## DOUBLE CHILD.

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BY W. WILLIS, ESQ.

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THIS case also is from Dr. Kidder's work, as reported by W. Willis, Esq., in *Obstetrical Transactions*, Vol. VI., sex, male; children were well developed, and connected from the upper part of the thorax down to the umbilicus. Umbilical cord double, and in one sheath entered the cavity between them at the band of union; one large single liver, one gall bladder, with two billiary duets and one large spleen. The intestinal canals and all other abdominal and thoracic viscera were double and perfect.

## UNITED CHILDREN.

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BY DR. BURNS

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R. BURNS quotes several strange cases, among which are the following, where two children were united by the inferior part of the belly, from the center of which came the cord. The vertebral columns almost touched at the lower part. The two children were of different sex, and lived twelve days. Nothing is said of the labor.

## DOUBLE CHILD.

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BY DR. CHURCHELL.

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HURCHELL says that in the *Bulletin* for 1818, page 2, there is a case where two children were joined by the back of the sacrum, and lived till the ninth day. There also is another case, at page 32, of a monster double child in its upper parts; the spinal column was united from the sacrum to the top of the dorsal vertebrae, then the cervical vertebrae divided to form the necks.

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## DOUBLE CHILD OF IRELAND.

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HERE is a skeleton in the Royal College of Surgeons of Ireland, of a double monster, the children being joined by the lower part of the sacrum. It is said that they lived for some time after they were born.

## DOUBLE CHILD. ✓

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BY DR. BERRY.


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**W**E are also indebted to Dr. Kidder for the following as well as several other cases, as stated before in this volume: He says that an article in the *New York Times* of April 4th, 1869, refers to several cases of united twins—one a case described by Dr. Berry, of two girls who lived to be seven years old. Food taken by the one nourished the other, but they were very different in character, and one sometimes was awake while the other slept.



## THE MARYLAND TWINS.

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E are informed, through the *Baltimore Sun*, of March 7th, 1874, of the birth, on the previous Wednesday, at Tobacco-stick, Dorchester county, of female twins, who were joined at the breast in a manner more wonderful than the late Siamese Twins. The Dorchester twins were of colored parentage. One of the twins was alive at birth, but died in a few seconds thereafter. The other, when born, was dead. The one first ushered into the world bore the impress upon its face of a genuine negro, while the complexion of the other was like that of a white person, and its hair less kinky than its sisters. Dr. La Count Smith, of Tobacco-stick, became possessed of the bodies of the twins soon after their birth, and, with them, arrived in this

city yesterday afternoon for the purpose of having the bodies properly preserved, which will be done by placing them in an aquarium-shaped vessel, filled with alcohol. Last night the Dorchester monstrosities were exhibited at the office of Dr. J. H. Tall, corner of Sharp and Lee Streets, in presence of several medical gentlemen. The bond of union connecting the bodies of the twins extends from the center of the breast bone to the navel, thus placing the bodies face to face. The bodies are well formed, and weigh ten pounds and a half, and measure eighteen inches in length. The physicians who were present at Dr. Tall's office last night gave as their opinions that each of the twins possessed separate stomachs, hearts, livers, &c., and that a wall separated the stomachs along that part where the bond of union exists. The only case on record where a similar bond of union ever existed is in the London Museum, and, like the Dorchester novelty, the twins were females.

## UNITED HEADS OF TWO INDIAN CHILDREN.

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R. RAMSBOTHAM, in his valuable work on Parturition, page 523, gives the following strange case : "Sir E. Home has described, in the 80th volume of the Philosophical Transactions, an Indian child which had two heads united together at their crowns, the upper one being inverted. The subject died of the bite of a rattlesnake when it was about four years old. It was found that the two skulls were nearly of the same size—equally complete in ossification. The frontal and parietal bones, instead of being continued over the top of the head, meet each other and are united by a circular

suture. The two skulls are almost equally perfect at their union, but the superior skull, as it recedes from the other, becomes imperfect, and many of its parts are deficient. The number of the teeth is the same in both. There is no septum of bones between the crania, so that the two brains must have been contained in one bony case. The dura mater of each, however, was perforated by a number of large vessels by which the upper brain was nourished. The skull was deposited in the Kentuckian museum, and is now in the possession of the Royal College of Surgeons."

## AN INTERESTING CASE—THE SIAMESE TWIN IN MINIATURE.

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N the neighborhood of four years ago, Dr. Massey, of Sandusky, presented as a contribution to the museum of the Homeopathic college of Cleveland, O., a remarkable specimen of twins which occurred in his practice, and which the parents were willing should be preserved for medical investigation. They may now be very fairly said to present renewed interest since the death of the Siamese twins, to whom they sustained a close resemblance in the manner of their union. The fleshy mass connecting them extended from the extremity of the breast bone (*sternum*) of each downward to the extent of about one inch, and was sufficiently long to admit their being placed side by side either to the right or to the left. Their

## GENERAL APPEARANCE

upon delivery was that of two plump, well formed boys of equal size, apparently having very nearly, if not quite, completed the term proper for all babes to observe before putting in an appearance for an independent existence. The body, head and limbs of each were all well fashioned, there being nothing in the external anatomy of the little ones to indicate that they might not be capable of maintaining life without the aid of an immediate union with the mother. Their features were quite regular, without, however, presenting any very marked resemblance to each other, or any marked peculiarity excepting the presence of the two upper central teeth, which were so well developed in each as to be plainly visible.

## THE POST MORTEM

was conducted by Dr. H. F. Biggar, in the presence of Professor G. P. Spence, Drs. C. C. Olmsted, W. A. Phillips, H. C. Frost, Messrs. E. C. Buell and W. H. Huntington, and revealed the following state of things: "The umbilical cord—there being only one for both—was quite normal, consisting of connective matter, two arteries and one vein, and entered the mass, uniting them at its lower central portion. An incision, extending from the entrance of the cord upward to the superior aspect of the connecting sub-

stance, and carried deep enough to freely divide the skin, only brought the thin membrane covering the bowels (peritoneum) plainly to view, and showed that this structure was continuous from one body to the other without interruption. Directly under the line of the incision it was also observed that the peritoneum was folded upon itself in such a manner as to form what is known as the broad, or suspensory ligament of the liver. Along the free border of this ligament, the umbilical vein could be traced by its junction with the under surface of the liver in body No. 1, and so far as the preservation of the specimen permitted the vessel to be followed, it was found to be every way natural as regards its distribution. A free opening was then made into the trunk and the liver of No. 1 thoroughly examined. It was found to be somewhat above the normal size and considerably displaced, the left lobe and a small portion of the right being wholly within the cylindrical mass joining the bodies. The liver belonging to body No. 1 was very nearly in position, but only about one sixth the size of the other, and was united thereto by a growth of proper liver substance, giving it the appearance of being an appendage of the larger one, notwithstanding the natural anatomical structure was well defined. A marked deviation was observed of



the kidneys—the right kidney of No. 1 being enormously enlarged, while the left one was entirely absent, not even a rudimentary structure being discernable in its stead. Both kidneys were present in body No. 2, but extremely small. The heart in No. 1 was fully half as large again as natural; that in No. 2 correspondingly small. The remaining internal organs were in no wise abnormal either as regards size, situation or structure. It is apparent from the above, even if the various internal organs of both infants had been capable of properly performing their several functions, and life had continued subsequent to their birth, that no surgical interference for the separation of the bodies could have occurred without speedily producing death.”

## MONSTROSITIES IN LOWER ANIMALS.

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**I**N the lower animals monstrosities occur much more frequently than in man, and the domesticated are more liable to these irregularities than those in a wild state. Monstrous pigs, sheep, puppies, kittens, ducks, chickens, fish, reptiles, &c. Some one of these are to be seen in almost every collection devoted to the elucidation of the subject of **reproduction.**

## MONSTERS AND MALFORMATIONS.

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THE person or animal that has any considerable degree of deformity, is denominated by the most of authors as a monster; but we are of the opinion that this should not apply to all such cases, as the meaning of the word in the English language is something horrid, or, in other words, something that will produce horror in the beholder, or looker on. Any person or animal produced with a shape, or with parts that are not natural, as when the body is ill formed or distorted, or the limbs too few or too many, or when any part is extravagantly out of proportion, either through defect or excess, or two are united together, they are said to

be monsters or malformations. We like the latter much the best and therefore we use it more frequently, for there are many of this interesting class of individuals that are beautiful and lovely to look upon, and inspire the beholder with admiration and wonder. All malformations are divided into classes, as follows: 1st, *Monstra Deficientia*; those in which certain parts of the body are absent or defective. 2d, *Coalitio Partium Symphysis*; those produced by fusion of organs. 3d, *Clefts Fissures*; those in which parts united in the normal state are separated from each other. 4th, *Atresia*; those in which normal openings are occluded. 5th, *Monstra Abundantia*; those by excess or in which certain parts have a disproportionate size. 6th *Situs Mutatus*; those in which one or more parts have an abnormal position. 7th, *Hemaphroditism*; those affecting the sexual organs.

## CAUSES OF CONGENITAL MONSTROSITY.

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**W**E intend to speak only of congenital malformation or monstrosity. Among the numerous hypotheses entertained on the origin or cause of malformation, six or seven, in our opinion, are worth mentioning, and may be given as follows : 1st, the influence of the maternal imagination on the fetus in utero ; 2nd, accidental changes, experienced by the fetus at some period of its uterine experience ; 3d, a primitive defect in the germs ; 4th, a plastic union of two germs from the commencement ; 5th, diseases of the fetus at almost any stage of existence in utero ; 6th, an abnormal state of the uterus of the mother ; and we are of the opinion that sickness or accidents to the mother should be enumerated. As a *medico-legal question*, monsters that are capable of action as individuals have the same rights as other persons. It is the opinion of the au-


thor that the 2nd, 3d and 4th are the most fruitful causes of malformation, although any one or all of them may have their advocates, (and do seem quite philosophical.) We are decidedly of the opinion that the 4th is the ONLY CAUSE OF DOUBLE OR UNITED TWINS; that is, a plastic union of two germs from the commencement, and this union may be either of the male or female germs, or both; or, in other words, "a united or double spermatozoid and a single ovule, or else a single spermatozoon and a double ovule, or graafian vesicle, with double yolk, or two yolks invested by the one membrane." In our opinion either one of the above combinations would be sufficient to produce twins in double or united form. 1st, in the production of malformations nature seems to do nothing by chance, but rather to observe certain general though not universal laws; for instance, deviation from the normal do not proceed *ad infinitum*, but are confined within certain limits, although organs which should lie on the right may appear on the left, and those that should be on the left may appear on the right. For example, the liver may be on the left side and the heart may be on the right, &c., yet the brain has never been found in the chest nor the kidneys in the skull. 2nd, excessive development of one part may cause imperfect or retarded development of another. Thus fingers and toes in

excessive numbers are often joined to a monster without a brain, or one hand may be wanting and the other have a superabundance of fingers, &c. 3d, malformations, according to different authors, are more rare in organs supplied by cerebro-spinal nerves, (as the larynx, lungs, &c.,) than in those supplied by the sympathetic, digestive, urinary and generative. The vascular system is the most liable of all. 4th, in malformations dissimilar parts are never seen fused or united with each other. 5th, no malformed organ loses entirely its own character. 6th, female malformations are by all accounts more frequent than male. 7th, Meckel has collected many examples of the hereditary nature of malformations, and their repetition in children of the same parents. (some of which we will hereafter mention.) 8th, in the case of twins one child may be malformed and the other perfect. 9th, we believe that a woman that has produced one malformed child is no more apt to produce the second than if she had never had one of malformed parts, unless it be hereditary in her family. 10th, as far as we can learn, as stated before, like parts are only united in cases of united twins.



## HEREDITARY CAUSES OF MALFORMATION.

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ECKEL has collected many examples of the hereditary nature of malformations, a marked example of which we here give, showing the transmission from one generation to another, and so on: "A man with six fingers to each hand, and six toes to each foot, transmitted the same malformation to his eldest son; whose three sons again were born with the same redundant organization." Haller gives an interesting account of a web-footed family, who descended from a mother in whom that singular configuration existed. For this information we are indebted to Dr. Jerome Kidder's work, (*Vital Resources*), for the following: "There is now living in London a musical composer of some celebrity, in whose person nature has played a similar freak; and whose father, grandfather, and great-grandfather, were all web-footed before him." The *Medical and Surgical Reporter*, of Philadelphia, August 29th, 1868, refers to a case of hereditary hair-

lip in a little girl five years old, lately brought to the attention of the Surgical Society of Paris, by M. Demarquay: "The interest of the case lies in the fact that, in the family from the grand-parents downward, eleven children have been born with hair-lip, or with a peculiar conformation of the lower lip, namely, two openings on either side of the mesial lines, traversing the whole labial thickness, with a peculiar form of the lip itself."

#### A STRANGE CASE OF REDUNDANT ORGANIZATION.

In the year 1845 there lived a family in Fayette county, State of Illinois, by the name of Nicholas, having six or seven children, four of whom had seven toes on each foot; and my informant, Mr. S. Philbrook, of this place, (Delaware, Ohio), says that these four were very large girls, and their feet resembled large fans, as he expressed it. The author is also acquainted with a family in which there was a pair of twins, each one of which had two thumbs on each hand.

Dr. Ramsbotham gives the following cases, in appendix to his work on Parturition, page 523: "In the year 1831, two children were brought to my house, twin boys, of a fortnight old, one of them with a supernumerary finger and toe on each hand and foot, the other with only one extra finger on the right hand; the toes had apparently well formed

joints, by which they were connected to the metatarsal bones; the fingers merely hung by a pellicle of skin. I saw the mother afterwards, and found she had a supernumerary finger and toe on each hand and foot, with perfect joints, and capable of motion. She told me that she had borne twenty-one children, that all the girls but one were born with extra fingers and toes; but only one of the boys, beside the twins, was affected in the same manner. She also said her mother and one of her sisters were subjects of this kind of irregularity." From the above strange cases and many others that could be mentioned, that much resemble these, we are decidedly of the opinion that these deviations from the natural formation are, in many cases, hereditary.

Prof. H. Ramsbotham, M. D., in his excellent work on *Obstetric Medicine and Surgery*, says, "The varieties of monstrous formations in excess are so many and diversified, that it is utterly impossible to lay down rules to meet all exigencies. The conduct of the case, therefore, may be left entirely to the judgment of the practitioner; and the welfare of his patient will depend on the correctness of the views he has formed of natural and instrumental delivery, and on the dexterity he may have acquired by practice.


## LILLIPUTIANS.

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THE SMALLEST BEINGS EVER SEEN ON THIS PLANET.  
A MICHIGAN SENSATION.

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[Inter-Ocean Letter (Jan. 20, 1874) from Kalamazoo.]

AST Friday evening the wife of Mr. J. B. McCrum, living at 58 Parsons street, gave birth to a pair of twins—a boy and a girl.

The surprise of the parents can be imagined when, on surveying the party, the nurse held up the tiny pair of infants in the palm of one of her hands. They were soon after weighed, and the aggregate avoirdupois of the twins was three pounds and four ounces, one of the pair weighing one pound and eight ounces, and the other weighing one pound and twelve ounces. They were less than eight inches long, and perfectly formed. A bed was made for them, which consisted of a minute basket filled with cotton-batting, and clothing had to be improvised for the strangers, that which in expectancy had been made

up proving a world too wide for their little limbs. Some doubt was expressed by the physician who attended the mother as to whether they would live, but up to this morning they are not only alive, but are lively, bright, and wide-awake, and claim a place in this big sphere as well as their own immediate brothers and sisters, of whom there are several in the family, grown up.

There have been since Monday a great many visitors to see the little children, and the exclamations of surprise and the ejaculations of admiration would fill a large volume. Ladies and gentlemen, old and young, flock to the house where the children lay. Pink and blue ribbons have been tied about the little arms of the babes, so as to answer the question of which is boy and which is girl. The sensation is likely to last some time, though every precaution is taken to preserve the lives of the little ones. They nurse and seem to enjoy themselves as well as could be expected. They are perfectly formed, and, we understand, are full-time children. Wrapped in their little beds they look like dolls suddenly vivified; their cries are like those of very young kittens. Mrs. McCrum has not been in the enjoyment of perfect health for several months past, but has not, however, been sick. The parents of the Lilliputians make no objections to people coming to see them.

Some of the following extracts are from LIVES OF GREAT AND CELEBRATED CHARACTERS, published by Leary and Getz, of Philadelphia, in 1854, and are compiled from authentic materials :

DANIEL LAMBERT, THE CORPULENT MAN,  
(WEIGHT, 739 POUNDS.)

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**W**HILE this extraordinary person lived, his immense bulk and other peculiarities made him not only an object of surprise and wonder to the multitude, but of curious and interesting speculation to the man of science and the medical practitioner. It was impossible to behold his excessive corpulence, without being astonished that he was not suffocated by such an accumulation of fat ; but when the spectator ascertained that his breathing was perfectly free, and his respiration not in the least obstructed, even in sleep, that astonishment was proportionately augmented. Altogether he was considered by his contemporaries as one of the greatest wonders of his time. We shall proceed to give a few particulars of his life and character.

Daniel Lambert was born on the 13th of March, 1770, in the parish of St. Margaret, at Leicester. From the very extraordinary bulk to which Mr. Lambert attained, the reader may naturally be disposed to inquire whether his parents were persons of remarkable dimensions. This was not the case, nor were any of his family inclined to corpulence, excepting an uncle and an aunt on the father's side, who were both very heavy. The former died during the infancy of Lambert, in the capacity of gamekeeper to the Earl of Stamford, to whose predecessor his father had been huntsman in early life. The family of Mr. Lambert, senior, consisted, besides Daniel, of another son, who died young, and two daughters, who were both women of common size.

The habits of the subject of this memoir were not in any respect different from those of other young persons till the age of fourteen. Even at that early period he was strongly attached to all the sports of the field. This, however, was only the natural effect of a very obvious cause, aided probably by an innate propensity to those diversions. We have already mentioned the profession of his father and his uncle, and have yet to observe that his maternal grandfather was a great cock-fighter. Born and bred, as it were, among horses, dogs, cocks, and all the other appendages of sporting, in the pursuits of which he was



encouraged, even in his childhood, it cannot be matter of wonder that he should be passionately fond of all those exercises and amusements which are comprehended under the denomination of field sports, as well as of racing, cock-fighting, and fishing.

Brought up under the eye of his parents till the age of fourteen, young Lambert was then placed with Mr. Benjamin Patrick, in the manufactory of Taylor & Co., at Birmingham, to learn the business of a die-sinker and engraver. This establishment, then one of the most flourishing in that opulent town, was afterwards destroyed in the riots of 1795, by which the celebrated Dr. Priestley was so considerable a sufferer.

Owing to the fluctuations to which all those manufactures that administer to the luxuries of the community are liable from the caprices of fashion, the wares connected with the profession which had been chosen for young Lambert ceased to be in request. Buckles were all at once proscribed, and a total revolution took place at the same period in the public taste with respect to buttons. The consequence was, that a numerous class of artisans were thrown out of employment, and obliged to seek a subsistence in a different occupation. Among these was Lambert, who had then served only four years of his apprenticeship.

Leaving Birmingham, he returned to Leicester to his father, who held the situation of keeper of the prison in that town. Soon afterwards at the age of nineteen, he began to imagine that he should be a heavy man, but had not previously perceived any indications that could lead him to suppose he should ever attain the excessive corpulence for which he was afterwards distinguished. He always possessed extraordinary muscular power, and at the time we are speaking of could lift great weights, and carry five hundred weight with ease. Had his habits been such as to bring his strength into action, he would doubtless have been an uncommonly powerful man.

His father having resigned the office of keeper of the prison, Mr. Lambert succeeded to the situation. It was within a year after this appointment that his bulk received the greatest and most rapid increase. This he attributed to the confinement and sedentary life to which he was now obliged to submit, which produced an effect so much the more striking, as from his attachment to sporting, he had previously been in the habit of taking a great deal of exercise. Though he never possessed any extraordinary agility, he was still able to kick to the height of seven feet, standing on one leg.

About the year 1793, when Mr. Lambert weighed thirty-two stone, he had occasion to visit Woolwich, in company with the keeper of the county jail of Leicester. As the tide did not serve to bring them up again to London, he walked from Woolwich to the metropolis with much less apparent fatigue than several middle-sized men who were of the party.

The inhabitants of Leicester are remarkable for their expertness in swimming, an art which they are encouraged to practice by their vicinity to the river Soar. From the age of eight years, Mr. Lambert was an excellent swimmer, and such was his celebrity, that all the young people in his native town who were learning to swim, resorted to him for instruction. His power of floating, owing to his uncommon bulk, was so great, that he could swim with two men of ordinary size upon his back. We have heard him relate, that on these occasions, when any of his young pupils manifested any timidity, he would convey them to the opposite bank of the river from that on which they had laid their clothes, and there leave them to find their way back as well as they could. By these means they soon acquired that courage which is so indispensably necessary to the attainment of excellence in the art of swimming.

Mr. Lambert's father died about five years after his son's appointment to be keeper of the prison, which office he held till Easter, 1805. In this situation he manifested a disposition fraught with humanity and benevolence. Whatever severity he might be under the necessity of exercising towards the unhappy objects committed to his care during their confinement, he never forbore to make the greatest exertions to assist them at the time of their trials. Few left the prison without testifying their gratitude, and tears often bespoke the sincerity of the feelings they expressed. His removal from the office was in consequence of a wish on the part of the magistrates to employ the prisoners in the manufactures of the town. As a proof of the approbation which his conduct had merited, they settled upon him an annuity of £50 for life, without any solicitation whatever, and what was still more gratifying to his feelings, this grant was accompanied with a declaration, that it was a mark of their esteem, and of the universal satisfaction which he had given in the discharge of the duties of his office.

Mr. Lambert, notwithstanding his gross appearance, was a man of nice feelings, and it was with much difficulty that he was brought to entertain the idea of exhibiting himself. Though he lived exceed-

ingly retired at Leicester, the fame of his uncommon corpulence had spread over the adjacent country to such a degree, that he frequently found himself not a little incommoded by the curiosity of the people, which it was impossible to repress, and which they were continually devising means of gratifying, in spite of his reluctance.

A gentleman traveling through Leicester conceived a strong desire to see this extraordinary phenomenon, but being at a loss for a pretext to introduce himself to Mr. Lambert, he first took care to inquire what were his particular propensities. Being informed that he was a great cocker, the traveler thought himself sure of success. He accordingly went to his house, knocked at the door, and inquired for Mr. Lambert. The servant answered that he was at home, but that he never saw strangers. "Let him know," replied the curious traveler, "that I called about some cocks." Lambert, who chanced to be in a situation to overhear what passed, immediately rejoined: "Tell the gentleman that I am a *shy* cock."

On another occasion, a gentleman from Nottingham was extremely importunate to see him, pretending that he had a particular favor to ask. After considerable hesitation, Mr. Lambert directed him to be admitted. In being introduced he said he wished to inquire the pedigree of a certain mare. "Oh, if that's

all," replied Mr. Lambert, perceiving from his manner the real nature of his errand, "she was got by impertinence out of curiosity."

Finding, at length, that he must either submit to be a close prisoner, in his own house, or endure all the inconveniences without receiving any of the profits of an exhibition, Mr. Lambert wisely strove to overcome his repugnance, and determined to visit the metropolis for that purpose. As it was impossible to procure a carriage large enough to admit him, he had a vehicle constructed expressly to convey him to London, where he arrived, for the twenty-second time, in the spring of 1806, and fixed his residence in Piccadilly.

His apartments there had more the air of a place of fashionable resort than of an exhibition; and as long as the town continued full, he was visited by a great deal of the best company. The dread he felt on coming to London, lest he should be exposed to indignity and insult from the curiosity of some of his visitors, was soon removed by the politeness and attention which he received.

The spirit of politeness which always prevailed in the presence of Mr. Lambert, was such as was, perhaps, never observed on a similar occasion. The very Quakers by whom he was visited, felt themselves *moved* to take off their hats. It is but natural to suppose that among the numbers who chose to gratify their curiosity, some few exceptions should occur. Thus, one day, a person perceiving, previous to entering the room, that the company were uncovered, observed to Mr. Lambert's attendant, that he would not take off his hat, even if the king was present. This rude remark being uttered in the hearing of Mr. Lambert, he immediately replied, as the stranger entered,—“Then, by G——, sir, you must instantly quit this room, as I do not consider it a mark of respect due to myself, but to the ladies and gentlemen who honor me with their company.”

Many of the visitors seemed incapable of gratifying their curiosity to its full extent, and called again and again to behold to what an immense magnitude the human figure is capable of attaining; nay, one gentleman, a banker in the city, jocosely observed, that he had fairly had a pound's worth.

Mr. Lambert had the pleasure of receiving persons of all descriptions and of all nations. He was one day visited by a party of fourteen, eight ladies and



six gentlemen, who expressed their joy at not being too late, as it was near the time of closing the door for the day. They assured him that they had come from Guernsey on purpose to convince themselves of the existence of such a prodigy as Mr. Lambert had been described to be by one of their neighbors, who had seen him ; adding, that they had not even one single friend or acquaintance in London, so that they had no other motive whatever for their voyage. A striking illustration of the power of curiosity over the human mind.

Among the many visitors of Mr. Lambert, the celebrated Polish Dwarf, Count Boruwlaski, was not the least interesting. Mr. Lambert, during his apprenticeship at Birmingham, went several times to see the count, and such was the strength of the little man's memory, that he had scarcely fixed his eyes upon Lambert, in Piccadilly, before he recollected his face. After reflecting a moment, he exclaimed that he had seen the face twenty years ago in Birmingham, but it was not surely the same body. This unexpected meeting of the largest and smallest man seemed to realize the fabled history of the inhabitants of Liliput and Brobdignag, particularly when Lambert rose for the purpose of affording the diminutive count a full view of his prodigious dimensions. In the course of conversation, Mr. Lambert asked what quantity of

cloth the count required for a coat, and how many he thought it would make him. "Not many," answered Boruwlaski. "I take a good large piece of cloth myself—almost three quarters of a yard." At this rate, one of Lambert's sleeves would have been abundantly sufficient for the purpose. The count felt one of Mr. Lambert's legs. "Ah, mine Got!" he exclaimed, "pure flesh and blood. I feel de warm. No deception! I am pleased, for I did hear it was deception." Mr. Lambert asked if his lady was alive; on which he replied, "No she is dead, and," putting his finger significantly to his nose, "I am not very sorry, for when I affront her, she put me on the mantel-shelf for punishment."

The many characters that introduced themselves to Mr. Lambert's observation in the metropolis, furnished him with a great number of anecdotes, which a retentive memory enabled him to relate with good effect.

One day, the room being rather crowded with company, a young man in the front, almost close to Mr. Lambert, made incessant use of one of those indispensable appendages of a modern beau, called a quizzing-glass. The conversation turned on the changes of the weather, and in what manner Mr. Lambert felt himself affected by them. "What do you dislike

most ?" asked the beau. "*To be bored with a quizzing-glass,*" was the reply.

A person asking him, in a very rude way, the cost of one of his coats, he returned him no answer. The man repeated the question with the observation, that he thought he had a right to demand any information, having contributed his shilling, which would help to pay for Mr. Lambert's coat as well as the rest. "Sir," rejoined Lambert, "If I knew what part of my next coat your shilling would pay for, I can assure you I would cut out the piece."

On another occasion, a lady was particularly solicitous to have the same question solved. "Indeed, Madam," answered Mr. Lambert, "I cannot pretend to charge my memory with the price, but I can put you into a method of obtaining the information you want. If you think proper to make me a present of a new coat, you will then know exactly what it costs."

A person, who had the appearance of a gentleman, one day took the liberty of asking several grossly impertinent questions. Irritated at these repeated violations of decency, which bespoke a deficiency of good sense as well as good manners, Mr. Lambert fixed his eyes full upon the stranger; "You came into this room, sir, by the door, but——" "You mean to say," continued the other, looking at the window. "that I

may possibly make my exit by some other way." "Begone this moment," thundered Lambert, "or by G——d I'll throw you into Piccadilly." No second injunction was necessary to rid him of this obnoxious guest.

In September, 1806, Mr. Lambert returned to Leicester, but repeated his visit to London the following year, and fixed his abode in Leicester square. Here, for the first time, he felt inconvenienced by the air of the metropolis, and accordingly, by the advice of Dr. Heavside, his physician, he returned to his native place.


Till within a short time of his death, this wonderful man enjoyed an excellent state of health, and felt perfectly at ease, either while sitting up or lying in bed. His diet was plain, and the quantity very moderate, for he did not eat more than the generality of men. For many years he never drank anything stronger than water. He slept well, but scarcely so much as other people, and his respiration was as free as that of any moderate sized person. His countenance was manly and intelligent; he possessed great information, much ready politeness, and conversed with ease and facility. What was more extraordinary, however, in a man of his bulk, he sung melodiously, his voice being a strong tenor, and his articulation perfectly clear and unembarrassed.

Mr. Lambert now took a tour through the principal cities and towns, and for two or three years was as great a wonder in the provinces as he had formerly been in London, retaining his health and spirits till within a day of his death, which took place at Stamford, in Lincolnshire, on the 21st of June, 1809. In the morning he gave orders to his printer to prepare handbills announcing his arrival and exhibition ; in the evening he was a corpse. He had been weighed a few days before at Huntingdon, and by the Caledonian balance was found to be 52 stone 11 lb. (14 lb to the stone ;) or 10 stone 11 lb. heavier than the celebrated Mr. Bright of Essex. His measure round the body was three yards four inches, and one yard one inch around the leg. A suit of clothes for him cost £20. His sporting propensities never left him. Cocks and dogs were his special favorites, and he made the *Racing Calendar* his particular study.

## HENRY JENKINS.

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[AGED 169 YEARS.]

 HE only account extant of this venerable man is that given by Mrs. Anne Saville, who resided at Bolton, in Yorkshire, where Jenkins lived. On taking up her residence there, she one day questioned Jenkins about his age. "He paused a little," says she, "and then said, that to the best of his remembrance, he was about 162 or 3; and I asked, what kings he remembered? He said, as far back as Henry VIII. I asked what public thing he could longest remember? he said Flodden-field. I asked whether the king was there? he said, no; he was in France, and the Earl of Surrey was general. I asked him how old he might be then; he said, I believe I might be between 10 and 12; for, says he, I was sent to Northallerton with a horse-load of arrows, but they sent a bigger boy from thence to the

army with them. All this agreed with the history of that time ; for bows and arrows were then used, the earl he named was general, and King Henry VIII. was then at Tournay. He told me, too, that he was butler to the Lord Conyers, and remembered the Abbot of Fountains Abbey very well, before the dissolution of the monasteries." Jenkins died December 8, 1670, at Ellerton-upon-Swale, in Yorkshire. The battle of Flodden-field was fought September 9, 1513, and he was then 12 years old. So that he must have lived 169 years, or 16 years longer than old Parr. According to Mrs. Saville, there were four persons in the same parish at the time of his death, who were all reported to be upwards of 100 years old, and their testimony went to establish his great age, as they had known him from their youth upwards, and he was then far advanced in years.

In conclusion, kind reader,  
Allow me to hope and pray,  
That thy pathway be covered with flowers,  
Of the richest and purest attire,  
And that thou may spend many bright hours  
Is my earnest and hopeful desire.

THE AUTHOR.









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